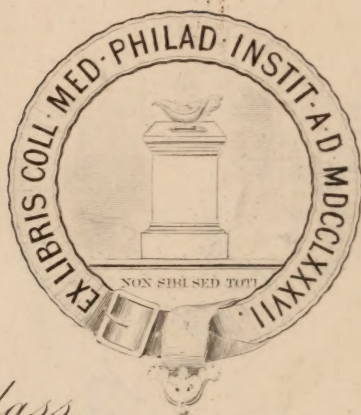





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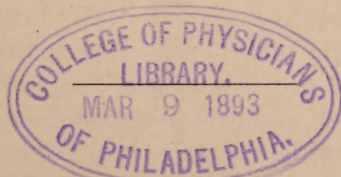
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LANDON B. EDWARDS, M. D.,
EDITOR AND PROPRIETOR.

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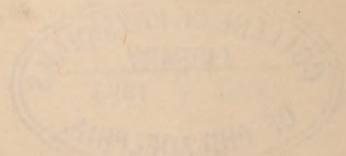
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VIRGINIA MEDICAL MONTHLY.

VOLUME XIX—No. 1.

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Original Communications.

ART. I.—Hebephrenia—Mental Derangement of Puberty.

By WILLIAM A. HAMMOND, M. D., of Washington, D. C.,

SURGEON-GENERAL UNITED STATES ARMY (RETIRED LIST).

By *hebephrenia* is to be understood a special form of mental derangement occurring in young persons of both sexes at or soon after the age of puberty. The existence of this peculiar variety of insanity has long been known, and isolated cases have been published in the journals devoted to mental diseases; but it is only within comparatively recent years that it has received anything like the attention it deserves.

The first systematic description of the affection published in this country was, I believe, that given by me in my *Treatise on Insanity*, issued about seven years ago. As the disease is certainly becoming more common, owing, doubtless, to the vicious manner in which young people are brought up; and as several interesting cases of the morbid condition in question have recently been under my care, I hope that what I have to say at present will prove worthy of the attention of the readers of the *Virginia Medical Monthly*.

The disease in the beginning is manifested chiefly in the emotional part of the mind. The patient becomes depressed

in spirits—sometimes to such an extent as to cause more or less well-directed attempts at suicide, though these are rarely so persistent as to lead to fatal results. Generally, the subject repents before he has done enough in the way of self-destruction to cause death.

In one case under my observation, a boy about sixteen years of age plunged into the river headforemost after leaving a note on the wharf that he was tired of life; but with the first touch of the cold water he changed his mind, for as soon as he rose to the surface he struck out vigorously for the shore and returned home much colder if not wiser than when he left it.

In another, the patient, a youth who had just reached the age of puberty, and who had for several months been complaining of his hard fate, although there was nothing in his condition in life to warrant his gloomy forebodings, took a notion to kill himself with a pistol. He very carefully loaded the weapon, and placed the muzzle over his heart. Before pulling the trigger, however, he weakened in his purpose, and extracted the ball from the cartridge. He again pointed the pistol at his heart, but, before he discharged it, deflected the muzzle slightly to the left, so that the only effect was the spoiling of some clothing and a slight burning of the skin.

There appears with these people to be a settled conviction that the efforts they make to perform the duties or tasks which have been assigned them are not adequately appreciated, and that no matter how faithfully they may work, they will derive no personal advantage from their labors. The future, therefore, appears dark and forbidding; and the element of hope, which is of such vast importance as an incentive to youthful minds, is gradually eliminated from the mental organism of the boy or girl, as the case may be.

Of course this is all morbid; but it is none the less real, so far as they are concerned. At first there is only doubt, but this very soon becomes a fixed apprehension or fear, which gradually increases till it assumes a predominating influence. The subjects feel that they are not understood; they misinterpret the actions of those around them into evidences of conspiracies. They become suspicious of those

with whom they have heretofore associated, and whom they have regarded as their best friends; and they make themselves not only the enemies of those they have been accustomed to love and respect, but of the whole human race.

It is not long before there is a marked deterioration in their moral qualities. Conceiving, as they do, that fair and honest dealing will avail them nothing, but, on the contrary, will be employed to their disadvantage, they do not hesitate to lie, to cheat, to steal, and to resort to all kinds of deceit and subterfuge to accomplish any object they may have in view.

"It would have been no use," said a boy of fifteen to me after he had run away from school with money and other things that did not belong to him, "for me to have asked the principal for money and to let me go home, as I was ill. He would have refused and have punished me besides. So I just took what I could lay my hands on and went off at night when they were all asleep. You may send me back, but I will run away again the first chance I get. Everybody is down on me there. If I learn all my lessons, they find fault with me, and if I don't learn them, it's no worse; so what's the use? Send me back, but the next time I run away I won't come home, and you won't find me either."

He was returned to school, when, in the course of less than three months, having made five attempts at suicide (once by hanging with his suspenders, once by choking himself with an apple-core, once by jumping out of a second story window by which he broke his leg, once by taking laudanum, and once by shooting himself with a shotgun), the principal refused to have anything more to do with him. He was brought home, and I recommended his confinement in a lunatic asylum. He, however, became aware of what was in contemplation, and the night before he was to go he escaped from the house, since which time no intelligence whatever has been received of him.

Generally it is the case that the symptoms of hebephrenia are developed so gradually, that the disease has become well established before it is recognized as a form of insanity to be combatted by active medical and hygienic treatment.

The peculiarities of character and disposition which are being developed are generally regarded as so many evidences of wickedness, to be treated with severity, or perhaps to be let alone as beyond cure by moral regimen. Schools get rid of such pupils as the one above referred to, and very properly, for their example is decidedly pernicious; and parents, not knowing what to do with them, put them—if pecuniarily able—under the charge of a tutor with instructions to eradicate, by some process which the tutor is supposed to know, the evil propensities which, in some way or other, have been contracted; or they send them to another school, from which they either soon elope or are expelled, or they are kept at home to do nothing but to remain apt subjects for the future development of the disease.

In any event, this development is sure to come. Delusions of various kinds begin to make their appearance, and these are formed, not from illusions or hallucinations, which are never present in the inception of the disorder, but out of the morbid thoughts of the subjects themselves, and are almost invariably of an intensely selfish character.

Thus, a young woman seventeen years of age, who came to my clinique at the Bellevue Hospital Medical College, and who had several times run away from home and been brought back by the police, had the idea that she had been especially endowed by the Virgin Mary with the ability to read the thoughts of people in any part of the world. Her father was a sailor, and was absent from home, and she was continually reminding her mother of what he was thinking at any particular moment; and these thoughts were always of her, and of the deep pain he felt at the idea of the bad manner in which she was treated. On one occasion she went suddenly into the kitchen and threw the dinner into the fire, saying that her father thought it was not good enough for her to eat. Again she picked a mattress to pieces because her father thought it was not soft enough for her to sleep on. On still another occasion she threw all the crockery out of the window and broke the furniture, because, as she said, her father thought she ought to eat out of silver and use mahogany chairs and tables. Finally, intelligence was received of the death of her father, when she laughed, and said she had known all along he was not coming home,

but that instead of being dead he had married another woman in Lisbon, and had taken her to the East Indies. Soon after this she went before a police magistrate and made oath that her mother had beaten her severely—showing some bruises which she had received by a fall on the ice—and returned home with a policeman armed with a warrant for her mother's arrest. In this case, masturbation was verified. The disease went on unchecked, and the patient is now in a state of hopeless dementia.

In another instance, the patient, a young man, who had been found impracticable at every school that he had attended, took the notion that all the misfortunes that had befallen him, were due to the fact that his teachers and companions were jealous of his intellect, and had for years been industriously engaged in the work of undervaluing his abilities, and of keeping him in a subordinate mental position. He declared also that at home he was not understood; that no one was more assiduous in the performance of filial duties than he, but that all his efforts were misinterpreted and ascribed to an inherently depraved nature. It was found impossible to keep him at any steady employment, for similar ideas cropped out on every occasion, resulting either in his throwing up his work, or being ignominiously discharged. Finally he conceived the delusion that he was under the special protection of Providence, and that no matter how others conspired to injure him, or if he should attempt maiming himself or suicide, God would prevent his suffering any damage either to his mind or body. As an evidence of his implicit faith in this belief, he one day threw himself out of a second-story window; but though he broke his arm and received several severe bruises, he maintained that he had escaped unhurt. He was in the habit of holding lighted matches under his hands, and though he always succeeding in inflicting more or less severe burns, he was firm in his declarations that he had suffered no injury nor endured the slightest pain. Finally he took a cold bath in his clothes, and then exposed himself in the open air for over an hour at a temperature near the freezing point. In this last act of his folly he contracted pneumonia, from which he died.

In addition to the involvement of the intellect as regards false conceptions, there is always a marked deterioration of the force of the mind. The power of concentrating the attention is diminished, sustained thought upon any one sub-

ject becomes impossible, and the ability to comprehend is greatly impaired. The facial expression exhibits the mental weakness of the patient, and there are frequent paroxysms of silly laughing, the reason for which is never given. Accessions of acute mania are not at all uncommon at this period, and then illusions and hallucinations are formed.

In a young gentleman, the subject of hebephrenia whom I saw in consultation with Dr. Kittredge, of Fishkill, and who had several times run away from home, there were almost constant hallucinations of hearing and paroxysms of imbecile laughing. He had had several attacks of acute mania.

In another whom several years ago I committed to Dr. Kittredge's asylum, there were similar phenomena conjoined with well-marked systematized delusions.

These symptoms may exist for several years before the passage of the affection into the stage of dementia ensues. Sooner or later, however, this is the termination.

Probably hebephrenia is equally common to the two sexes, although Fink restricts it entirely to males. It appears to be induced by any cause capable of lessening the vital powers of the individual, among which masturbation and also the inception of the menstrual function are pre-eminent. One of the worst cases I ever saw occurred in a boy of sixteen from South America, and was the result of excessive masturbation. I sent him to Dr. Parsons, at Sing Sing, and it was found necessary to watch him night and day without intermission to prevent the act of onanism. The case was in all respects a typical one of hebephrenia. Several months had elapsed when the patient first came under my observation; there were then illusions and hallucinations; there had been several acute maniacal attacks, and there was the characteristic tendency, so frequently observed, to run away. The favorable result obtained by Dr. Parsons' care goes far to lessen the force of the gloomy prognosis usually expressed in regard to the affection.

Undoubtedly masturbation, when practiced to excess, may modify to a greater or less degree the symptoms of hebephrenia, but the product is not entitled to be considered a

separate form of mental derangement. The *insanity of masturbation* is simply hebephrenia with the additional phenomena due to excessive onanism. Just as we meet with the peculiar condition produced by this vice without there being hebephrenia, so we encounter the latter affection when there is no reason to suspect masturbation. Nevertheless, the connection is an important one, and ought not to escape the attention of the physician. The influence of masturbation in causing insanity has been known from the earliest period; but the relation has never been so graphically set forth as by Dr. Luther Bell, of the McLean Asylum in Massachusetts, who published his observations nearly forty years ago. It has also been described by Schroeder van der Kolk; but many authors, as, for instance, Ellis, fail to discriminate between cause and effect in their remarks on the relation of onanism with insanity. Nothing is more common than for lunatics of all types to practice masturbation, and doubtless the vice produces modifications in the physical and mental condition of the patient.

Hebephrenia is most apt to make its appearance not at the very beginning of puberty, but a year or two afterward, when the system is experiencing to the utmost the demands made upon it. Hereditary influence is certainly a strong predisposing factor in its etiology.

It is generally the case that patients affected with hebephrenia suffer more or less from constipation. In some cases the intestinal inertia is so great, that the bowels do not move more frequently than once in two or three weeks, when violent diarrhœa is liable to supervene, to be followed by another period of constipation.

There are rarely any other symptoms of a marked character. Sometimes there is insomnia, and again there may be occasional headache, but these are not prominent characteristics of the disease.

The treatment that is proper in hebephrenia naturally divides itself into the moral, hygienic, and the medicinal.

Under the first named head are embraced all those means which are directed towards obtaining control of the mind

of the patient, and guiding it so far as may be possible in a right course. If after sufficient experience it should be found that this cannot be done without subjecting the individual to physical restraint, there should be no hesitation in depriving him of his liberty. But to incarcerate him in an ordinary insane asylum, where he will be surrounded by lunatics, and left to his own devices, is about as bad a plan of procedure as can be adopted. Nothing can be better for a patient the subject of hebephrenia, than to place him under the control of a sensible and well educated physician, who understands the necessity for mental and physical discipline, and who is endowed with sufficient firmness to carry out his principles. It is impossible to lay down any rules for the guidance of such a physician which will be applicable to all cases of the disease, for no two can be treated in exactly the same way.

One word, however, may be said, and that is, that he must thoroughly comprehend the efficacy of a proper system of rewards and punishments. It may take several years before success is attained, but I have seen enough to be firmly convinced that many cases of the disease that would otherwise be irreclaimable may be saved, and the subjects made useful members of society.

Of course it is advisable that the sanitary surroundings of the patient should be as perfect as possible, and there should be some means for insuring active, and even severe physical exercise daily, and, if possible, in the open air. The more I see of patients affected with any form of mental derangement, the more I am convinced that bodily fatigue, compensated for by sufficient rest and good nutritious food, ranks among our most efficient means of cure.

As to medicines, there are a few points which are deserving of consideration. If there is undue sexual excitement, some one of the bromides should be administered in full doses. They are also efficacious in subduing mental agitation and for procuring sound and refreshing sleep with the least possible injury to the patient. They are of little use unless administered in doses of at least fifteen grains three

times a day, with a double dose at bed-time, if the condition of the patient seems to require the increase. The bowels should be open daily, and for this purpose I have found nothing better than a pill taken at bed-time compounded as follows :

R.—Aloes ext. aquosæ.....gr. xx
 Fel bovis exsiccata.....gr. xxv
 Podophyllin.....gr. ij

M.—Fit in pill. No. x. S.—One at bed-time.

Indeed, I have often found great benefit derived from the administration of this pill nightly every alternate night for a month or more at a time, even though the bowels be not obstinately constipated. It certainly lessens venereal excitement and produces mental sedation when more direct means fail. Any intercurrent disorder that may arise in the course of the disease should be combatted by appropriate measures.

Under such a course of treatment, I have found hebephrenia by no means the hopeless affection which it is commonly regarded to be; but I again cannot too strenuously insist upon the point that all means are likely to fail, unless the patient can be removed from his home surroundings and subjected to scientific and strong-minded discipline.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

ART. II.—Oxygen Gas—Some of its Therapeutic Uses.

By JUNIUS F. LYNCH, M. D., of Sanford, Fla.

When we consider how necessary oxygen is to animal and vegetable life, we cannot help but wonder why it has not been more generally employed as a remedy by reputable physicians. I have used it in private and hospital practice for nearly two years, and the better I become acquainted with it, the more thoroughly convinced am I that it is a valuable remedy, and one that we cannot afford to ignore. It is what the invalid seeks at the seashore and in the mountains. The tired and overworked man of business, prostrated and exhausted by the tremendous nervous strain to which he has been subjected for months, returns from a trip to the mountains or the shore rejuvenated and ready for work, and he owes his new life to oxygen gas.

Oxygen is the reviver *par excellence*; it induces a more uniform movement of all the functions, and restores the strength of the enfeebled organism; and what can be accomplished at the seashore or in the mountains, has often been accomplished by oxygen inhalations. I have seen it, after a few months' use, bring the bloom to the cheeks of an anæmic girl, and I have seen it stop a paroxysm of asthma as if by magic. But oxygen is *not a cure-all*; it is simply the *ideal tonic*; and, like other remedial agents, should not be used at random.

In using oxygen as a remedy, the utmost care should be taken to have it *absolutely pure*. It should be made from reliable chemicals, and washed repeatedly before the patient is allowed to inhale it.

In order to obtain the full benefit of the gas, certain rules should be observed in *its administration*: The patient should sit perfectly erect, with the shoulders thrown well back. With the tube in the mouth, he should take a long, deep inspiration of the gas; and, after retaining it as long as possible, expel it slowly through the nose. The gas must be inhaled slowly, not over once or twice a minute, but each inspiration should be full and deep. The amount admin-

istered daily should be from eight to ten gallons, and it is better to give this in two sittings of fifteen or twenty minutes each—say one in the morning and one in the afternoon.

Used in this manner, and persisted in, oxygen will seldom fail to be of benefit. It is frequently the case that, for the first few weeks, there will be no apparent improvement, and the patient becomes discouraged; but he should be encouraged to take it regularly, and persevere in it. Then, again, there are cases that it seems to benefit from the start; this is particularly true of *asthma* and *nervous prostration*. I have in my mind's eye now a young professional man here in Sanford, who has been an asthmatic for years. Whenever he feels an attack of asthma coming on, he inhales a few gallons of oxygen, and nips the paroxysm in the bud.

Below I report a few cases that are now under treatment.

CASE I.—*Phthisis, Insomnia, Night Sweats, Cough, etc., Relieved by Oxygen Gas*.—A young gentleman from Atlanta, Ga., applied to me for treatment three weeks ago. An examination of the lungs revealed phthisis. He complained of night sweats, inability to sleep, and loss of appetite. Coughed almost constantly, with copious expectoration. For the past three weeks he has used oxygen gas. The night sweats have disappeared; he sleeps better, and his appetite is returning; he has gained several pounds in weight, and the cough has ceased to trouble him.

CASE II.—*Nervous Prostration, Nausea, Tingling Sensations, Dyspnœa, etc., Relieved by Oxygen Gas*.—Mr. X., a gentleman from New York, was advised to come to Florida by his physician. This is a typical case of nervous prostration, due to overwork. Previous health has always been good. An examination of the heart reveals no organic lesion. Pulse, 120; respiration difficult and asthmatic in character. Complains of constant nausea; appetite *nil*. The slightest exertion completely prostrates him. Complains constantly of a disagreeable tingling sensation all over the body, particularly at the ends of his fingers. After having used various remedies without success, I advised him to try oxygen gas. The improvement has been wonderful. The nausea has disappeared entirely, and he not only retains his food, but enjoys it. The tingling sensation has disap-

peared, and the dyspnoea relieved. He is rapidly regaining his strength, and can walk two or three blocks without stopping to rest.

CASE III.—*Epilepsy: Improvement under Oxygen Treatment.*—Miss Y., a young lady of 19, unmarried, was sent to Sanford to undergo the oxygen treatment. Has been an epileptic for years; is very anæmic; menstruation irregular and scanty. She began the oxygen inhalations three weeks ago, and the improvement has already been marked. She has gained in weight, and says she sleeps better and eats more than she has for months. She has not had an epileptic seizure since her arrival in Sanford.

ART. III.—Hepatic Cirrhosis.*

By E. A. COBLEIGH, M. D., of Chattanooga, Tenn.,

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE AND DERMATOLOGY.

Gentlemen,—It gives me pleasure to present this man, kindly sent by a medical friend in a distant Georgia town. The case affords an opportunity to show several interesting points connected with that comparatively rare affection about which I recently lectured to you.

This patient, Mr. B., aged thirty-four years, and a carpenter by occupation, has resided for the last two years in Florida. He denies having suffered any malarial symptoms during his stay in the Land of Flowers, or having been in any way ill, except that during the last twelve or fourteen months he has shown some moderate symptoms of indigestion, coupled with occasional morning vomiting of mucus. For the last eight or nine months he has, besides this, felt more or less uneasiness and weight in the gastric region, and some "heaviness" over the liver. At first, his appetite remained good, and he ate what he pleased. But recently, he has voluntarily limited himself mostly to a diet of milk in some form, because he found, experimentally, that this best agreed with him.

He looks in good health still, his flesh being very well preserved, and, as you see, his complexion is florid. There is not yet any sallow hue nor emaciation, nor special loss

* Clinical Lecture before the Class of the Chattanooga Medical College.

of strength, except that he finds it impossible to further pursue his vocation, and he is somewhat breathless on exertion or on climbing a hill. He denies the use of alcoholics to excess, but admits that he takes a drink whenever he wants it, and intimates, on close questioning, that he probably drinks *some* nearly every day, using spirits as his beverage. The stools have been "clayey" much of the time, and bowels rather constipated, but alternating with diarrhœa quite recently. Of late, too, he finds that he has vomited blood on several occasions, and in considerable quantity, it being dark and grumous. He is also given to passing more or less altered blood by stool almost daily during the last couple of months; and very recently his feet swell a little, so that he has been obliged to procure a pair of shoes a size larger than those formerly worn.

Now, gentlemen, what do we find here? From this history, and the physical examination of the patient, which adds some further signs on which to base a diagnosis, we can hardly recognize anything but the existence of some hepatic abnormality. We find physically that there is decided lessening of the area of hepatic dullness; but the thickness of the abdominal wall prevents what otherwise we could probably detect, and what will, no doubt, be readily recognizable at a later stage, when emaciation makes it easy—a nodular condition of the hepatic border and surface. This would give us the familiar "hob-nailed" condition which I have previously laid stress upon.

The whole history and symptoms here remind me very strongly of another case I now have under observation and treatment in private practice, except that my other patient is a woman (in good circumstances, too,) and has reached the stage that she is confined to her bed, emaciated, feeble, nearing the inevitable end of her malady. Similar to this case, she likewise gives the history of steady, but, as she says, "moderate," spirit drinking during at least five years past.

But we find another matter in the present patient to which I specially wish to direct your attention, partly because the condition is more excessively marked than I have ever seen it heretofore. So extreme is this manifestation

that the physician who sent him here wrote me that he was evidently suffering, "among his other troubles, from an enormous dilatation of the stomach, and some surgical condition, which demands interference as a matter of humanity."

You will recollect that when lecturing on this subject of cirrhosis, I presented the pathological changes going on in the hepatic viscus, prominent among which was the interstitial hepatitis destroying the normality of the ultimate prolongations of fibres of the capsule of Glisson, causing contraction of the fibrous tissue around the hepatic cells, thus interfering with the natural movement of blood through that extensive and important system of vessels constituting the "portal circulation." The result of this state of affairs may be either one of two conditions, or both—dropsy or the establishment of a new channel of circulation by anastomosis, causing varices in situations where venous circulation normally is not in excess. To a slight degree, we find the former here by the œdema of the lower extremities, necessitating a larger shoe than formerly.

But it is the latter which is specially interesting because of its existence to an *extreme* degree. On exposing the abdominal surface, at a glance you note great deformity, which has the appearance of a tumor underlying the muscular wall or imbedded in said wall itself. This is the supposed gastric dilatation which my medical friend found and hastily ran aground of as a "surgical disease requiring removal." On careful interrogation of the mass—indeed, on superficial inspection alone—it is evident that the trouble here is solely one of profound varix of the superficial abdominal veins, which are enormously distended and tortuous, reaching the size of a foetal head at term at the point where the mass is most conspicuous.

This excessive degree of collateral circulation fully accounts for the absence until now, and its present occurrence to only a limited extent of dropsy, of the dependent portions of the body, and an entire lack of ascites when the liver alterations have reached such a considerable degree of advancement. The mass of the portal blood is returning to the heart, and thus finding its way back to the general

circulation through this unusual channel—through the tremendously enlarged epigastric and mammary veins, some branches of which you see look through the integument as large as my finger.

The whole group of symptoms points, then, conclusively to the existence of the diseased state designated *cirrhosis of the liver* and excludes any other hepatic ailment—and this condition must depend on some mischief in that viscus, as it is the portal blood which is here obstructed; and no other abdominal organ bears a relation thereto which could bring about this state of affairs.

Now, let us briefly recapitulate the whole subject of this disease, as emphasized before you by the case here present: *Hepatic cirrhosis* is an inflammation of the connective tissues of the liver—so named by Lænnec from the Greek word meaning “tawny,” or reddish-yellow; and is not a term as generally believed, used to designate the hardness of the organ, though it has come to be applied to all indurated connective tissue states of different organs. There first occurs hyperplastic overgrowth, with corresponding enlargement, followed by the contraction usual with fibrous new growths. Both may exist at the same time in different portions of the same liver.

Thus results a squeezing process exerted on the portal capillaries and liver cells, causing trophic disturbances and degenerations. The bile-duct radicals are encroached on, as well as the rootlets of the hepatic vein. There is general enlargement of the entire liver, but most marked in its vertical diameter, and at this stage it is smooth of surface. The capsule is opaque and much thickened, and universal induration of the viscus is taking place. This, with hyperæmia, uniformly constitutes the primary stage. Contraction now ensues in most cases, with peritoneal adhesions, especially with the overlaying diaphragmatic surface.

Lack of time precludes my going minutely into the *morbid anatomy*; so I will here merely say that there is a mottling of the organ by the growth of fibrinous bands through its substance, by bile-staining from obstruction at the lob-

ule centres, causing undue deposits of pigment, and by fatty degeneration of these same lobules at their periphery.

The gall-bladder frequently participates in the general catarrhal action, which likewise involves the stomach and duodenum—peritoneal processes having been already referred to.

In the so-called hypertrophic cases, there is merely a preponderance of the hyperplastic elements; but real cell atrophy and lobular changes uniformly take place, and the essential pathological degenerations universally mark *every* occurrence.

Visceral portal stases are inevitable from the relations of this circulatory system, and consequent splenic hypertrophy or engorgement follow, as well as the catarrhal states already named which depend on this same cause.

As to etiology in the vast majority of cases, alcohol plays an important part. Not one of the cases falling under my own personal observation has lacked the history of alcoholic indulgence. This substance, in its passage through the portal system *en route* to the lungs, where it is burned up more or less completely, necessarily irritates the hepatic cells and elements. Thus, by uninterrupted and excessive stimulation in habitual drinkers, a constant hyperæmia is brought about, which finally results in actual morbidity. And remember, it is the steady, daily imbiber rather than the periodical dipsomaniac who developes this affection. Here I must mention that rich foods, especially in hot climates, and the gouty or rheumatic diatheses, syphilitic toxæmia, malarial influences, and excesses generally, have each seemed at times to stand in a causative relation to cirrhosis. Indeed, rarely has it been found that cases have presented in which no special factor could be found to account for the morbid beginning.

The symptoms give us dull pain—as weight here—over the hepatic region. Dyspnœa happens from both enlargement and from ascitic accumulations, as well as from deranged circulation and from imperfectly prepared food products in the blood by reason of defective digestive pro-

cesses. There is headache sometimes—it has occurred with this man. Loathing of food is a symptom, especially on sitting down at table, even if hungry before, and meats are particularly obnoxious; such has been this patient's experience. Diarrhœa and constipation often alternate, depending on the catarrhal state of the intestine and indigestion.

You will note specially the similarity between these symptoms and those of *duodenal catarrh*, which co-exists with cirrhosis. If jaundice happens, it is generally late in the case and not very pronounced, because there is no obstruction to the free outward flow of bile through the larger bile ducts if this substance is secreted at all. Occasional pyrexias—temporary—and vertigo are sometimes present. The integument takes on rather a cachectic, dirty, clay-colored hue, and intercurrent attacks of peri-hepatitis cause the occasional pain in these conditions, as pleuritis does with an underlying diseased lung.

A low form of gastritis supervenes, circulatory as to production. This likewise causes hæmatemesis observed in many of these cases, as well as the intestinal bleedings and piles (which this man suffers from). Hæmorrhage may be directly fatal by its frequency or profuseness. If a compensatory circulation does not occur, ascites develops. Compensation happens in several ways: Sometimes by communication between the phrenic vein and some of the portal branches. Again, diaphragmatic vessels of the portal inosculate with the internal mammary and epigastric, as in this case, generally showing the greatest external enlargement on the right side, while here it is on the left; or peritoneal adhesions afford entirely new channels of circulation. Sometimes some of the portal vessels in the liver itself escape the compression, and enlarge sufficiently to allow continuing as well as compensatory blood-flow directly through that organ to the right heart, through inosculature with enlarged hepatic capillaries. Renal and intestinal branches sometimes act thus vicariously together. And lastly, the hæmorrhoidal branches of the inferior mesenteric occasionally find outlet through the internal iliac. Our present pa-

tient has escaped the ascites through such a comparatively perfect re-arrangement of his circulation as is involved in one or other of the ways here mentioned.

The venous engorgement and consequent discoloration around the umbilicus through enlargement of the internal mammary, causes the condition heretofore mentioned to you as denominated the "caput medusæ." So you see that ascites may not appear till the last of a case; but after it does present, it is usually persistent and quite annoying by adding to the discomforts and dangers of the patient. And now pressure from without the organ may give rise to dropsy by obstruction of the biliary ducts. Mentation commonly remains clear till the very last. In exceptional instances, however, the mind is disturbed, hebetude appearing, or even delirium. The stools are likely to be either "clayey," or "ringed," with fæces of varying colors. The urine is high colored, and not seldom albuminous.

Physical examination shows sometimes tenderness over the diseased organ—in the early stages a smooth and enlarged liver, later becoming decreased in its area of dullness, and nodulated as before stated. Varix presents often, as here shown in an extreme degree, the "caput medusæ" accompanying. Icterus and ascites are likewise discoverable by physical examination if they exist at all. The clay-colored complexion does not manifest itself in this patient thus far.

The diagnosis has been dwelt upon in a previous lecture sufficiently, and depends on a grouping of the symptoms mentioned as prominent. So I will not here further consider it in detail; but will direct your attention to the facts briefly, that in *fatty liver*, we find good "livers" as to diet, an oily skin, enlarged, smooth, soft organ, and no pain or symptoms such as met in cirrhosis, no dropsy, no varix, no emaciation. In *waxy liver* there is a history of syphilis, bone disease, or suppuration. In *peritonitis (chronic)*, gastric symptoms are not usually prominent, as vomiting and hæmorrhage; there is abdominal tenderness, a characteristic anæmic pallor,

rapid dropsy, showing inflammatory products in the fluid drawn. *Gastric ulcer* has nothing in common with this affection as to manifestations, except hæmatemesis and vomiting, lacking all signs of direct hepatic derangement. *Cancer of the liver* gives us more pain and tenderness, a peculiar cachexia, absence of splenic enlargement, and a history entirely different from that of cirrhosis.

The prognosis you know full well. Even at this stage, with the experience of past cases, we plainly read the inevitable "handwriting on the wall." Sometimes it runs its entire course within three or four months after atrophy begins; again, averaging from twenty to twenty-four months. Intercurrent diseases often hasten fatality, or hæmorrhage directly or prematurely closes the scene. Occasionally journal writers give cases of *cured* cirrhosis, but we always decide that these must have been errors of diagnosis. Certainly, in my own experience, the issue has been uniform, though variable as to duration of the ailment.

The treatment may be summed up briefly also—symptomatic. Possibly we may "stay" but never prevent nor change the pathological processes already having occurred. Like tuberculosis, this disease never shows replacement of destroyed tissue. Dietetic management and abstinence from spirits are essential, and the latter must be absolute. Practically, its handling is very similar to the treatment of its co-existent gastro-duodenal catarrh. Palliative and roborant measures are in demand here. Indeed I must refer you to general principles of therapeusis rather than to any particular remedial agencies. Aid digestion, regulate the bowels if necessary, promote the comfort of the sufferer so far as possible, sustain life to its utmost limit, "obviate the tendency to death." Control excessive bleedings, the smaller ones relieving vascular congestion, and seeming rather salutary as to the patient's temporary comfort than otherwise. Ascites demand the same measures as if dependent on other causative influences, provided the strength admits of harsh treatment. Tap if required. In such cases as these, squills and digitallis accomplish their most magical results.

Now what will we do for this man? Nothing. Why? Because he has a family in the western part of the State and relatives near Louisville to whom he should go at once. This I shall advise, that they may look after him later. There is nothing brilliant to be accomplished by us through keeping him here, and certainly I shall not subject him to the suggested "surgical treatment" of my Georgia friend, as there is nothing to be removed by operation. So, glad as we are of the opportunity he has kindly furnished us of observing his case, particularly as regards its great vascular changes externally, I shall merely tell him to proceed on his homeward journey and enjoy as well as he can the rest of his life in the bosom of his family.

ART. IV.—The Conservative Treatment of Pyosalpinx.*

By LLEWELLYN ELIOT, A. M., M. D., of Washington, D. C.

Conservatism too frequently is the cry of timidity, ignorance, or despair. This is true in gynæcology, obstetrics, medicine, and surgery, and very many times it is uttered without reason. A wise conservatism is a thing we do not often see; still it is, at times, thrust upon our better judgment, and we must accept it or retire from the case.

In the treatment of cases of tubal disease, there are some points which have not received the attention their importance warrants; the one to which I shall refer is the non-operative treatment of pyosalpinx. Time was when the tendency was to refer all catarrhs of the genital tract to either puerperal infection or gonorrhœal infection. It is needless to say how unjust this has been, for we all know the fallacy of such a charge; at the same time, we all accept these two as very potent factors in the causation of vaginitis, endometritis, and salpingitis. The mucous and the serous surfaces are the ones affected by a gonorrhœal inflammation. Destructive suppuration seldom results from a gonorrhœal inflammation; this accounts for its little tendency to spon-

* Read at a meeting of "The Medical and Surgical Society of the District of Columbia," on February 8th, 1892.

taneous recovery. As the fluid accumulates in the tubes, the extremities of the tubes become occluded by adhesive peritonitis, this peritonitis becomes chronic, extends from bad to worse, matting the viscera together, producing pain, interfering with the functions of the bladder and the rectum, and we have the patient reduced to the last stages of invalidism. In such cases, the uterine sound and probe have been passed into the fallopian tube, and tincture of iodine have been applied to these parts. Clarke has reported cases so treated in the *Transactions of the American Association of Obstetricians and Gynæcologists*, Vol. I, p. 172, in a paper on the "Treatment of Certain Cases of Salpingitis." Should the tubes be closed and sealed against the probe, thorough dilatation of the cervix, and patience and perseverance will oftentimes succeed in overcoming the difficulty.

The passage of the uterine sound, or probe, or catheter is an operation which requires gentleness and an acute sense of touch. It is attended with pain, extending even down the legs.

Dr. Thomas Moore Madden, of Dublin, in a paper (*Transactions Ninth International Medical Congress*, Vol. III, p. 563), on the "Treatment of Sterility in Women," under the heading, "Ovarian and Tubal Sterility," says:

"It would seem to me quite as rational to amputate the breast for an ordinary mammary abscess as to remove the fallopian tubes merely because they may be the seat of serous or purulent exudation. In many cases of the latter, there is, as I can vouch from clinical experience, no impossibility of reaching and removing the collection, whether a hydro- or a pyosalpinx, by aspiration, or in some instances by catheterization of the diseased fallopian tube.

"Many years ago, having occasion to use the sound in a patient suffering from dysmenorrhœa, and a long time sterile, I was surprised—there being no enlargement of the uterus—to find the sound pass in up to the handle, and that it had obviously entered the right fallopian tube. A year subsequently, that lady gave birth to her first child, after eight years of married life. Since then, I have repeatedly succeeded in accomplishing what, in the first instance, was but a happy accident, and more than once with a similar result."

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The possibility of catheterization of the fallopian tube is too often denied or ignored. We cannot always succeed in our efforts, but there can be no more impropriety in making the attempt than in similar attempts upon the Eustachian tubes, the lachrymal ducts, or the ureters, especially when it has been said that every man who has spayed a woman will live to regret it. After the fallopian tube has been dilated and drained, the judicious application of the faradic current will absorb the morbid deposits about the tubes, and lessen the general hyperæmia.

I shall cite briefly the history of a case treated after the line laid down:

Mrs. A., white, aged 36 years, multipara. Gave a history of repeated attacks of peritonitis, and several miscarriages. When called to visit her on the 2nd of April, 1889, she had a rapid pulse, temperature of 102, abdomen tympanitic, and all the signs of peritonitis; she had had a chill that morning before my visit. She was ordered a free purge, with the sulphate of magnesia and quinine sulphate in five grain doses every four hours, turpentine stupes to the abdomen. This treatment was continued on the following day. On the morning of April 4th, her condition was improved, but still her symptoms pointed to pyosalpinx. I earnestly urged an operation, explaining the possibilities of such a course; but to no purpose—the family refused point blank. The question then arose as to what I should do, whether to turn tail and run, or to try and evacuate the distended tube, and thus relieve the woman. As the people were wealthy and influential, I determined to attempt what had for some years been an ideal operation, to me; that is, drain the tube through the uterus. There was nothing in this operation, either anatomically or otherwise, that seemed impossible; but here was the woman's condition, and whether manipulation would increase the peritonitis, and thereby further endanger her life, was what I could not readily decide. I, however, determined to make the attempt.

On the morning of the 4th, as already stated, I dilated the cervix, and passed the uterine sound into the fallopian tube. This passage was not effected without difficulty, and it was attended with great pain. The opening of the fallopian tube was closed, and some time was spent in dilating the passage, but after the sound had passed into the tube,

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stinking pus flowed down on the handle—down into the vagina. Pressure upon the abdomen showed the presence of the sound, and the impulse was transmitted to the hand holding it. To relieve the pain and shock following this evacuation of long retained pus, she was given a quarter of a grain of sulphate of morphia. She improved immediately; the sense of fulness and stretching in the tube was no longer a cause of annoyance; the temperature fell and never rose, and she made a rapid and a complete recovery. She afterwards received treatment for a chronic endometritis and a multiple laceration of the os. This woman continues well to this day, suffering from no tubal disease, and has been pregnant, but had an abortion performed on her.

Now, here was a case of wise conservatism thrust upon me; but the lesson taught has not been lost, for I have practised the same treatment in other cases with a like success. The family of this woman refused to have an operation performed, preferring rather that she should die.

This brief history proves my plea for the conservative treatment of pyosalpinx; but I do not wish to be understood as advocating it to the exclusion of operative treatment, for there are cases belonging to each class.

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ART. V.—The Etiology and Prevention of Infectious Diseases.*

By **GEORGE M. KOBER, A. M., M. D.**, of Fort Bidwell, Cal.
(Formerly of Washington, D. C.)

It is in the field of infectious diseases where preventive medicine doubtless has and will continue to exert its greatest usefulness, and there is ample room when we contemplate the frightful mortality from these diseases. During the census year of 1880, consumption caused 91,270 deaths in the United States; scarlet fever, 16,388; diphtheria, 38,143; croup and allied diseases, 17,966; measles, 8,072; whooping cough, 11,064; enteric fever, 22,854; malaria, 20,231; and erysipelas, 4,275.

* Read before the Medical and Surgical Society of District of Columbia, February 8th. 1892.

Not many years ago, it was assumed that the infectious diseases were caused by a miasm, or a contagium. A miasm in the minds of those physicians constituted some hypothetical matter formed outside of the system, which contaminated the air and gained admission in respiration, and then produced pathological conditions. Moscati tried over a hundred years ago to demonstrate the character of malaria to the senses by condensing the moisture of the air over rice fields and marshy districts; and though certain organisms were found, all efforts proved useless to connect them with the disease as a causative factor, and thus the real nature of a miasm remained unexplained.

Another class of physicians assumed that many of the infectious diseases were caused by a contagium, by which they understood a specific morbid material generated within the body of persons affected with a certain disease, and capable of producing the same disease in others. This contagium was presumed to be communicable by immediate or mediate contact, but they failed to isolate the various specific agents or to demonstrate them to our senses.

About fifty years ago, Donne first demonstrated the presence of vibriones in syphilitic pus. In 1840, Henle ventured the opinion that the morbid matter of all infectious corpses was of a living organized character; and in order to determine whether the cadaver poison was produced by micro-organisms, he strongly urged to search for such organisms in the bodies of those affected with infectious diseases, and, if possible, to isolate them and establish their respective characters. This awakened a most earnest desire to determine whether or not organisms could be found in the bodies or excretions of infectious patients which might be the carriers or agents of the respective virus.

Very soon after this announcement, Davaine discovered the cause of *anthrax*; he found in the blood of animals suffering from splenic fever, invariably certain rod-shaped organisms, which, in 1855, were confirmed by Pollender and Brawell. These observers also demonstrated the fact that the blood of such animals inoculated into other animals

produced the disease in question, and the blood of animals thus inoculated likewise contained the peculiar rod-shaped organisms. Pasteur, in 1877, finally proved that inoculation of blood, which had been freed from these organisms, failed to produce anthrax. This led to the natural conclusion that there was a causative relation between these rod-shaped organisms and the disease in question.

In the beginning of the seventies, Waldeyer, Recklinghausen, Weigert, and others, discovered a number of micro-parasites in the internal organs and wound secretions of various surgical infectious diseases; and in 1876 Koch published his researches on the etiology of splenic fever and anthrax, and presented the life history of the bacillus anthracis, which is one of the many varieties of bacteria.

The simple methods employed by this author in the detection and cultivation of disease germs resulted in the discovery of many other pathogenic bacteria, viz: the tubercle bacillus of Koch; the bacillus of glanders, by Schülz and Loeffler; the lepra bacillus, by Hansen and Neisser; the gonococci, as the cause of gonorrhœa and gonorrhœal ophthalmia, by Neisser; the coma-bacillus of cholera, by Koch; the micrococcus erysipelatis as the cause of traumatic erysipelas, by Fehbeison; the tetanus bacillus, by Nicolaier; the staphylococcus pyogenes-aureus, albus, and citreus, the cause of suppuration, by Ogston and Passet; the lancet-shaped pneumonia bacillus as the cause of pneumonia; the bacillus of typhoid, by Eberth, etc. The evidence as to the cause of puerperal fever is still conflicting, but points to the fact that it is due to the micrococcus erysipelatis; nor is it settled whether Loeffler's bacillus or Prudden's streptococcus is the cause of diphtheria.

We may be disposed to smile with something less than contempt when we read of the importance attached to the microbic origin of certain diseases; but Koch has laid down *certain conditions*, upon the proof of which alone it can be asserted that *a particular microbe is the cause of a certain disease*. They are:

- (1) The micro-organisms must be found in the blood,

lymph, or diseased tissues of man or animals suffering from, or dead with the disease.

(2) The micro-organisms must be isolated from the blood or tissues, and cultivated in suitable media outside the animal body, and these pure cultivations must be carried on through successive generations of the organism.

(3) A pure cultivation thus obtained must, when introduced into the body of a healthy animal, produce the disease in question.

(4) In the inoculated animal the same micro-organism must again be found.

It has been shown, beyond a doubt, that some of the bacteria are the etiological factors of communicable diseases, and this is a strong argument in favor of those in which the proofs are not yet conclusive. For obvious reasons the inoculation of pure cultures cannot always be applied to man; but in diseases which are interchangeable between animals and men, the complete sequence of proof has been established, and the successful inoculation of certain pathogenic germs into healthy animals certainly warrants the assumption that similar results will take place in the human system.

What are bacteria? Prudden tells us that they are so small that for a long time scientists were uncertain whether they belonged to the animal or vegetable kingdom; but it is now definitely settled that they are plants, and closely related to the algæ. Under the microscope, we see that the bacteria or shizomycetes are made up of vegetable cells containing slightly granular matter and surrounded by a somewhat denser envelope; they are so pale and translucent that they can only be distinctly recognized by staining them.

The bacteria may be spheroidal, ovoidal, rod-shaped, or spiral-shaped, and have been named according to their form.

All *spheroidal bacteria* are called *micrococci* or simply "cocci." If they cling together and form chains they are called *streptococci*; if they are grouped together in a rather

irregular manner, like a bunch of grapes, they are called *staphylococci*.

Of the *rod-shaped bacteria*, the most common genus is called *bacillus*. If they are rather slender and delicate, they are called *leptothrix*. If they have the form midway between the round and rod-shaped bacteria, they are spoken of as *cocci-bacilli* or *cocci-bacteria*; the spiral or cork-screwed bacilli are called *spirillæ*, and the curved bacilli are spoken of as *coma-bacilli*.

Warmth, moisture, oxygen, and a certain amount of organic matter are essential for the growth of bacteria. When these conditions are present, the process of reproduction is so rapid that a single germ, by growth and subdivision, may give rise to over sixteen millions of similar organisms within twenty-four hours; they multiply either by transverse fission or by spore-formation.

Pathogenic bacteria may be present in all the media with which we come in contact, *i. e.*, in the air, water, soil, food, the wastes of human life, in the excretions and secretions, in the blood, in the internal organs, and on the surface of the skin. Yet we must not assume that they are omnipresent, for many of them select, after all, only certain localities or media. This is quite true of the *plasmodium malaria*, and likewise true of the *bacillus of syphilis*. The latter appears to select exclusively the human body as a suitable soil for its growth.

So far, only the staphylococci of pus and the somewhat dubious bacillus of malaria have been demonstrated in the *open air*.

In the *air of rooms*, the bacillus of pneumonia, of anthrax and tuberculosis, and the micrococci of pus and erysipelas have been isolated.

In the *water supply*, the bacillus of cholera and of typhoid have been demonstrated.

In the *soil*, the bacillus of anthrax, of typhoid, of tetanus, and malignant œdema have been found.

In *articles of food*, the bacilli of anthrax and tuberculosis,

and the staphylococci of suppuration have been found in the milk and meat of diseased animals.

In *clothing*, the staphylococci of pus, the bacillus of anthrax and malignant œdema have been demonstrated, and there is reason to assume that the germs of all diseases conveyed in the air, can also be carried in clothing.

It has also been shown that the walls, floors, and ceilings of our habitations may harbor disease germs. The pneumonia bacillus has been found in the ceiling spaces, the bacillus of tetanus in mortar, and the tubercle bacillus on the walls, floors, bedsteads, and in fly spots.

The surface of our body harbors many bacteria, both harmless and pathogenic. They are especially numerous in the armpit, between the toes, and the dirt of finger-nails. Multman demonstrated no less than seventy-two varieties of bacteria in nail dirt. Of the pathogenic forms, the micrococci of pus and the tubercle bacillus have been demonstrated in nail dirt.

The pyogenic cocci have also been found in the pustules of impetigo and sycosis, and the bacillus of syphilis in the secretions of syphilitic ulcers and condyloma. It is quite likely that the bacilli of cholera and typhoid will be found on the skin of persons soiled with dejecta, and that the scales of the epidermis contain the carriers of the acute exanthemata and of erysipelas.

In the mouth and saliva, there have been found four different bacteria, capable of producing septicæmia in animals; also the streptococci of diphtheria and the bacillus of tuberculosis and pneumonia, not to mention the oidium albicans, which belongs to the fungi, as the cause of thrush.

In the *mucus* of the respiratory passages, the bacilli of pneumonia and tuberculosis have been isolated; also Fränkel's and Weichselbaum's pneumoniococci. In *vaginal mucus*, the oidium albicans, the staphylococci of pus, and the streptococci of diphtheria have been found.

In the *intestinal* contents, the bacillus of cholera and typhoid, and it is assumed that the carriers of dysentery and tuberculosis are also present.

The *blood* and *internal organs* of healthy individuals are free from micro-organisms. In disease, the bacillus of typhoid has been found in the blood and spleen; the bacilli of anthrax and tuberculosis have been demonstrated in the blood and various internal organs; the same is true of the streptococci of diphtheria.

Normal *urine* has been found to be quite free from germs, but bacteria have been demonstrated in certain diseases of the bladder and embolism of the kidneys.

The *cutaneous perspiration* is believed to be free from microbes; if found, they are probably derived from the skin. The *exhalations* of healthy and diseased persons, even the breath of consumptives, have been found to be free from bacteria. But more remains to be done in this direction, as there are many infectious diseases which are doubtless in their first stage communicated by the exhalations of the patients.

In this connection, it is well to remember that, in addition to disease germs, there are many so-called *harmless bacteria*. The latter are so abundant and common that, apart from existing in the air, water, soil, and food, they are also found in the mouth and digestive tract of man, in the nose, in the respiratory passages, in the internal meatus. The fæces of the healthiest subjects contain numerous ferments and bacteria, and even the meconium of the new-born has been found to contain bacteria.

One of these bacteria, the *bacillus coli communis*, was considered heretofore a harmless inhabitant of the colon, but the recent studies of Rodet and Roux render it probable that the bacillus of Eberth is nothing more than a modification of the bacillus coli communis, and that the latter acquires its virulent features outside of the body. And this opens a question of much practical interest, Whether bacteria may be benign in one locality and malignant in another, or whether the property of infection is an adventitious one, depending upon the soil in which the organism grows, or inherent in its substance? Of this, more will be said hereafter.

Having indicated, briefly, where the disease germs have been found, it will be readily inferred that the air, water, soil, and articles of food are the principal media for their dissemination. Apart from these, clothing, bedding, and personal effects are common means of spreading infectious diseases. Man himself is often the cause of spreading disease germs. This is true of many mild cases of typhoid fever, and other diseases of a mild type, not to mention the spread of scarlet fever, measles, small-pox, etc., by convalescents and infectious corpses.

Perfectly well people may carry the germs in their clothing, or about their person, and infect some distant locality. One of the severest scarlet fever epidemics I ever encountered was due to a man who came after me on horseback, some sixty-five miles, to see some scarlet fever cases. He slept that night with one of his little nephews, and in less than ten days that boy developed scarlet fever, which subsequently invaded almost every family.

Insects, especially flies, are doubtless frequently the cause of spreading disease germs; they are usually present where the existence of germs may be suspected, and feed on the material likely to contain them. As a matter of fact, Celli, of Rome, in 1888, demonstrated that the bacilli of tuberculosis, of anthrax, and typhoid, as well as the micrococci of pus, retain their virulence and power of propagation after passing through the intestinal tract of flies. Spillmann and others have demonstrated that flies, which were caught whilst feeding upon the sputum of consumptives, contained invariably vital specific bacilli, and Hoffmann not only confirmed these observations, but also found them in the fly spots on the walls of rooms of phthisical patients.

As already indicated, bacteria require for their growth a suitable soil; they need moisture, carbon, nitrogen, and mineral matter, and quite a number also oxygen. The majority cannot exist in highly acid nutrient media, but prosper best in neutral and faintly alkaline media. It has also been demonstrated that they vary considerably with regard

to their pabulum; some flourish in certain media, where another species finds it hard to live.

The majority of pathogenic germs develop best at a temperature between 28° and 68° F. The vitality of some is destroyed at the freezing point, whilst others remain active even in ice for long periods. A temperature of 250° is quite likely to destroy all varieties of bacteria and their spores.

In the *cultivation of bacteria*, some interesting observations have been made. It would appear that wherever varying forms of bacteria are growing together a struggle for existence begins. The hardy and rapidly growing bacteria struggle with their weaker neighbors, and the weaker, as usual, go to the wall.

Thus it has been observed, that the bacteria of fermentation and putrefaction furnish a material which poisons neighboring pathogenic bacteria. But such an antagonism does *not always* exist, for many varieties appear to grow together, whilst others prepare the way for a succeeding race, and often one species adapts itself to the conditions which brought about the extinction of its predecessors.—(Prudden.)

Bacteriological studies have also shown us that, as the bacteria grow, they set free various chemical compounds—the result of their own life processes—chief of which are the ptomaines; they also liberate some of the amido-compounds of the aromatic series, and ammonia, taurin, fatty acids, hydrogen sulphate, carbon dioxide, carburetted hydrogen, and other stinking gases, not yet determined.

The subject of *ptomaines* is to us of special importance, because it is believed that these alkaloids, closely resembling the vegetable alkaloids in chemical and pathological properties, produce the real mischief in the human system.

Quite a number of ptomaines have been discovered, and we know to-day that the cadaver poisons, such as *cholin*, *neuridin*, *neurin*, *cadaverin*, *putrescin*, etc., are the products of bacteria. Ptomaines have also been demonstrated in decomposing milk, cheese, meat, and fish.

But most important of all, they have also been discovered in the culture fluids of certain pathogenic microbes. Thus *cadaverin*, first demonstrated in the human cadaver, has been found in connection with putrescin in pure cultures of the cholera bacilli. And it is believed that the symptoms of cholera are produced by these poisons; for when introduced into animals, violent inflammation and necrosis of the intestinal mucous membranes results.

Typhotoxin has been obtained from pure cultures of the typhoid bacillus; this alkaloid, when injected into animals, produces inability to control the voluntary muscles, and excites increased flow of the salivary and intestinal secretions.

Another ptomaine, called *tetanin*, has been demonstrated from the cultures of the tetanus bacilli. This alkaloid, when injected into animals, produces clonic and tonic spasms—in fact, the symptoms of tetanus. The recent researches by Koch as to the discovery and effects of *tuberculin* are too well known to require special notice.

The admirable methods of Brieger, employed in the detection of ptomaines, will doubtless succeed in demonstrating that such products are formed in all pure cultures of pathogenic bacteria, and this would, of course, materially enhance our knowledge as to the deleterious effects of these compounds on the system.

Indeed, it would seem that the time is not far distant, when we can say, that certain bacteria invade the system. These develop, under favorable conditions, in sufficient number to produce, by their own life-processes, certain ptomaines, which, in turn, cause a train of toxic symptoms not unlike those of the vegetable alkaloids. When we consider the peculiar idiosyncrasies of individuals to some of the vegetable alkaloids—morphine and quinine, for instance—we need not wonder at the variable effects of ptomaine intoxication in infectious diseases.

There is much reason for believing that the urticaria and gastro-intestinal symptoms produced in some persons after eating shell fish, etc., are due to the production of ptomaines

in susceptible subjects. It is also held that ptomaines may be formed in perfectly healthy individuals in the intestines, under the action of the bacteria of putrefaction, and the indol, phenol, skatol, and kreosol, found in the urine, are really products of these processes.

There is evidence to show, that one ptomaine may act as a counter-poison to others; we know, at least, that some of these products destroy the very organisms which generated them. So, for example, lactic acid, which is the product of the bacillus acid lactici, destroys that same bacillus in a one per cent. solution; and this, perhaps, explains the efficacy of lactic acid in the treatment of cholera infantum. Grawitz has shown that cadaverin in certain concentrations arrests the growth of the pyogenic micrococci. We also know that some species of bacteria die in the same culture fluid, while others live, which possibly furnished the material to poison their neighbors, and the presence of phenol, skatol, and kreosol, which are products of putrefactive micro-organisms, retard the growth of these same germs.

Many persons still believe in the spontaneous generation of bacteria, and naturally hold that, if disease germs cannot originate *de novo*, all efforts in prevention must prove useless, because the divine law of death has decreed otherwise. Whilst the experiments of Pasteur, Tyndall, and others, have shown that every living thing—be it man, beast, plant, or cell—must come from some pre-existing living thing, clinical experience points to the occurrence of many infectious diseases, which cannot always be traced to a pre-existing cause; and the question naturally arises, Where did the germs come from?

In 1886, I was called to treat three young "cow-boys," who had been alike exposed to the process of catching cold. One developed facial erysipelas; the second, an abscess of the thigh, following a slight saddle-bruise; the third, a case of typho-malarial fever. Here we have three young men, of average good physique, exposed to a chilling of the general surface, and consequent suppression of the cutaneous function, causing a retention of the effete matter in the

blood, which, in turn, supplied a suitable pabulum for the development of septic germs. Still, it seems to me quite a mystery, why, in one case, the micrococci of erysipelas; in another, the staphylococci of pus; and in still another, the etiological factors of typhoid fever and malaria, should have been developed.

In tracing the family history, I found that the mother of my erysipelas patient had died from that disease in one of her confinements. Such cases are especially calculated, in the absence of a pre-existing case, to suggest the *possibility of an auto-genetic origin of disease germs*.

In our present state of knowledge, we can only explain such cases by assuming that disease germs may gain admission into the system at all times, but can only multiply in sufficient numbers to produce mischief when the blood, from any of the numerous causes, is charged with an excess of waste matter. If disease germs are not omnipresent (and I do not believe they are), we must assume that auto-infection can take place. It is quite possible that the ordinary so-called harmless bacteria acquire virulence by suitable food and environments; and the retention of leucomaines and extractives in the blood, whose elimination has been interfered with, may furnish the requisite food for such transformations within the body; and that soil pollution and unsanitary surroundings may do so outside of the body. A disease thus developed could, of course, be spread in the usual manner.

In my *Report to the State Board of Health of California* in 1886, I attributed certain cases of typho-malarial fever and erysipelas to autochthonous septicæmia, and presented a strong argument in favor of the *de novo origin of diphtheria*. At all events, I adduced evidence to show that the same polluted soil and unfavorable sanitary surroundings were capable of developing different disease germs.

We know that there are mild and malignant epidemics of scarlet fever, measles, etc., indicating at least a difference of degree in virulence. We also know that the virus of certain infectious diseases may be attenuated; and there is

no special reason why certain harmless bacteria should not assume pathogenic action by changed environments within or without the body.

But whatever the origin of disease germs may be, I believe they would never produce deleterious effects if the human system were at all times fitted to resist them.

We certainly know that invasion of the microbes alone is not sufficient to produce the disease, because this can take place often enough. If, therefore, disease results, there must have been a state of the body which rendered it peculiarly liable to be affected injuriously by the respective morbid agent, and this we call predisposition.

Now, *what constitutes this predisposition?* Is it a weakness of the organism, a diminished power of resistance, or a peculiarity of the tissues—more especially of the tissue cells—which places them at a disadvantage in their struggle against the invasion and effects of these germs? Is it the addition or subtraction of a certain something in the blood, which furnishes the proper food for their growth? These are difficult questions to answer, but we will sum up the existing views on this subject.

In the first place, it is suggested that this predisposition in many persons amounts to only *simple lesions of the skin and mucous membrane*, which would favor the invasion of the germs. Thus it is held that the peculiar susceptibility of persons, suffering from whooping-cough and measles, to tuberculosis, is due to the catarrhal condition and alteration of the epithelial layer of the respiratory tract, which favors the invasion of the tubercle bacilli; for similar reasons the delicate mucous membranes of anæmic and scrofulous subjects are believed to favor the invasion of these germs. This is highly probable, when we consider that only the delicate mouths of children are susceptible to the effects of the *oidium albicans*. Loeffler has also shown that the vagina of young guinea pigs favors the inoculation of his diphtheria bacilli more than that of older animals.

Functional derangements of the stomach appear to play an important rôle in predisposition. Thus we know that nor-

mal gastric juice destroys the bacilli of cholera; but if the fluid is only faintly acid, neutral, or alkaline, this protection ceases, and the germs will reach the intestines and proliferate. This is doubtless true of many other germs.

For a time at least it was believed that the leucocytes assumed the rôle of defenders of the body against bacterial invaders—that, according to Metschnikoff, they are phagocytes in this, that they either swallow and digest the bacteria, or surround them so closely as to cut off their oxygen and food supply, and thus kill them. According to this theory, which was based on the fact that many dead bacilli were found inside the bodies of leucocytes, an animal whose white blood-cells can successfully battle with and eat up a given species of bacteria, enjoys immunity from its deleterious effects; if, on the other hand, they are not strong enough to resist them, the battle is lost and the way is open for the spread of the infecting germs.

Now, whilst it cannot be denied that bacteria have actually been found in the bodies of leucocytes, it does not follow that they were taken up alive and destroyed by these cells; and until this is shown, no proof exists that their action towards the bacteria differs in any way from that towards other dead matter which they absorb or transport. This has been well presented by that indefatigable bacteriologist, Dr. Prudden, of New York.

Indeed, recent experiments appear to indicate that after all, "it is the blood serum which possesses in different degrees in different animals and in varying potency with the different bacterial species, a most marked germicidal power;" and this same observer has proved that a similar germicidal power resides in fresh, human, non-inflammatory transudations. In his opinion, "this power is not directly associated with the formed elements of the blood or transudates, but is in some way dependent upon their albuminoid constituents, and that this singular and apparently most significant capacity of the body fluids is intimately associated with that complex condition which we call life."

Whatever the exact rôle of the blood may be, the influ-

ence of a healthy condition of this fluid cannot be questioned. If healthy blood offers a natural defence, impure blood would constitute a prominent predisposing factor; and the average layman may after all not be very wrong when he talks to us about his "blood being out of order."

We know from clinical experience, that bad food, impure air and water, and the absorption of putrid gases formed in the intestinal tract, general mal-nutrition, physical and mental exhaustion, fever, anxiety, etc., predispose to a number of infectious diseases; and it is not unreasonable to assume that these factors, apart from producing an alteration of the blood, also tend to lower the vital powers of the system, and necessarily diminish the power of resistance to bacterial invasion and their products. Wyssokowitsch's experiments have shown that the same bacilli, which under normal conditions of the blood were rapidly destroyed under the influence of a ptomaine poison, at once began to manifest their pathogenic effects.

In the light of clinical experience, the existence of an individual predisposition to infectious diseases cannot be questioned. We also know, that this may be congenital and acquired; and in our present state of knowledge, we may assume that a vulnerability of the tissues and tissue cells exists, which renders the system peculiarly susceptible to the invasion of certain germs, and the particular form of poison evolved during their life processes.

It is no more difficult to account for inherited vulnerable anatomical elements to certain germs and their toxic products, than to explain the hereditary transmission of physical and mental peculiarities, and the many idiosyncrasies to drugs, etc.

Now, whilst we find a natural predisposition to certain diseases, we also observe a natural *immunity from certain diseases*. This has been ascribed by some to the fact that the avenues for the invasion of the microbes are so well protected that they cannot enter the system, or that the blood and character of the tissues render it a poor soil for the proliferation of the disease germs; but these are unsatisfac-

tory explanations in many instances. We know there are mild and malignant cases of scarlet fever, walking cases of typhoid, and cases of a profound type. We also know that some systems are peculiarly susceptible to the physiological effects of certain drugs, and others are not. For all such reasons, I am tempted to accept Arlong's explanation, that immunity is due to the inaptitude of certain organisms to feel the effects of ptomaines evolved by the microbes. According to his explanation, germs of infectious diseases may exist within the body, and the disorder they give rise to may be absent; for infectious disease *does not exist merely* because some noxious micro-organisms have taken their abode in the system. They exist because functional or structural troubles are brought about through the agency of ptomaines. Of course, this explanation does not apply to *all* infectious diseases, for in some instances, one attack affords no exemption from a subsequent attack; indeed, the susceptibility is rather increased than diminished. This is true of malaria, gonorrhœa, croupous pneumonia, and erysipelas.

The question of practical interest as to *how the disease is brought about by the bacteria*, is next in order. Some of the germs evidently remain, for a time at least, at the point of invasion and vicinity; here they grow, and as they grow, evolve the so-called ptomaines, which being irritants, often cause an inflammation, and this as in erysipelas, malignant œdema, cholera, and some forms of pneumonia, may go on without suppuration. Other bacterial forms cause the white blood cells to gather about the parts, and as they accumulate more and more, the leucocytes die, and we have inflammation with suppuration, as in abscess, furuncles, impetigo, and sycosis; other forms of bacteria cause inflammation with necrosis, as in diphtheria, hospital gangrene, etc.

Another class of germs proliferate at the point of invasion, and subsequently invade the deeper tissues. This is probably true in tuberculosis. The bacilli of tetanus appear to proliferate at the point of invasion, and spread along the nerve trunks, and finally enter the blood. The germs of

syphilis and of leprosy are at first localized, and finally invade other parts. The virus of hydrophobia appears to develop first at the point of invasion, extends along the nerve trunks, and subsequently invades the central nervous system and blood.

In some diseases, the pathogenic germs are transported through the lymphatic spaces and vessels; in others, the invaders enter the blood, multiply there, and either remain or are deposited in different organs, or in all parts of the body; this may be said of the germs of anthrax, of typhoid, of acute miliary tuberculosis, and the various acute exanthemata.

An exact *classification* would be entirely premature. The most we can say at present is, that the effects of pathogenic germs may be local and constitutional, the result of the absorption of their toxic products. Take, for example, a case of malignant scarlatina, where a child in the midst of perfect health is suddenly seized with vomiting, perhaps violent diarrhœa, with a remarkably frequent and small pulse, and such sudden collapse that the pulse disappears within eight to twelve hours, the face and the extremities become cold, and death occurs in coma within twenty-four or thirty-six hours, without any eruption having appeared. Such symptoms point to paralysis of the cardiac centre; and if these and all the various shades of brain symptoms in infectious diseases are not the result of ptomaine intoxication, it will be difficult to account for them in any other manner.

If it be true that infectious diseases are produced by the invasion of bacteria, their subsequent development and the poisonous compounds evolved during their growth, the next question to be disposed of is, *How and under what circumstances do these processes terminate?*

We have seen that under certain circumstances the accumulation of disease germs and their products may be so great in the capillaries as to destroy the vitality of the part by cutting off the blood supply. Now this may be a purely local condition; but let us figure to ourselves all the blood of the body charged with an organic poison, the capillaries ob-

structed with the invaders; and should this perchance take place in the same vital organ, we can at once appreciate how either or both of these conditions may produce death. If death does not take place under such circumstances, it is because at this critical moment something occurs which renders further proliferation of the germs and ptomaine production impossible, and recovery ensues, provided pathological lesions do not prolong the disease.

It was at one time assumed that the bacterial invaders were eliminated by the kidneys and other emunctories of the body; but Wyssokowitsch's experiments indicate, that in animals, at least, they are not thrown off by the kidneys, unless these organs are themselves the seat of disease. Nor can we ascribe the destruction of the disease germs to the leucocytes; for it seems to me, if they were not vigorous enough to cope with them at the onset, it is not likely that their phagocytic power increased during the illness.

There remain but a few explanations. One is that recovery ensues because of the exhaustion of certain substances essential to their growth; in brief, they die for want of suitable food. The second explanation, which is extremely plausible, is, that the very poison evolved by the bacteria has accumulated to such an extent as to prevent their own growth, and they die self poisoned. There is nothing strained in this theory, as culture experiments indicate this possibility. Since some bacteria do not flourish with a high temperature, it has been suggested that a continuous fever heat may aid in their destruction; but this seems to me the least acceptable explanation.

I have consumed much of your valuable time in the presentation of our knowledge on the germ theory of infectious diseases. Many points are still obscure and require explanation.

Whether internal medication will ever succeed in rendering pathogenic germs innocuous remains to be seen. Whilst we possess remedies of decided value for local use, it is doubtful whether we can employ these agents in sufficient concentrations to be of service in internal medication.

Nevertheless, it is possible, that we may be able to diminish their virulence; and we can at least place the system in a better condition to resist them, and perhaps, after awhile, some appropriate antidotes will be found for the various bacterial forms and their toxic products.

In the meantime, the bacteriologist deals with living organisms. In place of hypothetical agents, like miasms and contagia, he has isolated these germs, demonstrated their morphology and biology, and to what extent they are instrumental in the production of disease, and how and by what means these organisms may be destroyed outside of the body. All of these studies indicate that much may be done by efficient and thorough disinfection in the prevention of infectious diseases; and it is in this field bacteriology will achieve its greatest triumphs, and humanity derive its greatest blessings.

ART. VI.—Urethral Fever.*

By STUART McGUIRE, M. D., of Richmond, Va.

ASSISTANT SURGEON ST. LUKE'S HOME FOR THE SICK.

The introduction of instruments into the male urethra is frequently followed by serious systemic disturbances. Unfortunately, owing to the different classifications of authors, considerable confusion has arisen in determining which clinical form of trouble is meant by the various terms employed. All, however, seem to agree that there are four distinct classes of cases, and the names I use in alluding to them are perhaps those having the widest acceptance.

The four forms of trouble are:

I. *Shock*, due to the simple contact of an instrument with the sensitive urethra and immediately following its introduction.

II. *Urethral Fever*, due to the absorption of leucomaines

* Read before the Richmond Academy of Medicine and Surgery, March 15th, 1892.

from decomposing urine and occurring shortly after the first urination following an operation.

III. *Catheter Fever*, due probably to pre-existing renal disease, and coming on shortly after beginning the systematic use of the catheter.

IV. *Septicæmia*, due to the introduction of bacteria into the bladder by means of a dirty instrument.

Of the varieties mentioned, the study of the second, or *urethral fever*, is perhaps the most practical; and hence I shall confine my remarks exclusively to it.

Perhaps no member present has not had the *following experience*. A patient in good, general health comes to you to have a stricture dilated or cut, and the operation is performed with little or no difficulty. Two or three hours afterwards, he desires to urinate, and in doing so feels a burning sensation. Suddenly a severe rigor comes on, accompanied by pains in the head, back, and limbs. The face is pinched and palid, and the expression anxious. There may be purging or vomiting; and suppression of the urine, more or less complete, is frequently seen. The temperature rapidly rises to 103° or 104° F., or even to 106° F. The pallor soon disappears, or may be replaced by flushing. The pulse is quick, hard, and wiry, and the breathing rapid. Thirst is intense, and there may be delirium. This continues for two or three hours and then the symptoms gradually subside. A little moisture appears upon the skin, and is soon followed by copious sweating. The pulse grows slower and softer, and the respiration less rapid. The pains diminish and the kidneys resume their functions. These are the symptoms of a pretty severe attack of urethral fever, and their alarming nature and suddenness of onset make it indeed a subject worthy of study.

Little was known of the *etiology* of the trouble until the publication of Mr. Reginald Harrison's article on the subject in 1888, and even now many doubt the correctness of his views.

Some claim that malaria, a malady which seems to get

the credit of all the mischief for which other diseases can not be held directly accountable, is the cause.

Others, among them Gouley, think that it is "due to shock, propagated by the sympathetic nervous system, and reacting upon the blood vascular system." If so, why is it that the symptoms do not follow immediately the introduction of an instrument, and are not proportionate to the severity of the operation? Or why is it that failure in attempting catheterization, even though the effort be prolonged and sanguinary, is never followed by urethral fever?

Sedillot, Beltz, and other writers, claim that it is due to the absorption of urine. If so, why does the disease not occur in the urinary extravasation or infiltration, or after the operations of lateral or supra-pubic cystotomy? Surely, in these cases, where a large, raw surface is continually bathed in urine, absorption should be greater than after the passage of a sound, or internal urethrotomy.

Reginald Harrison thinks that the disease is a distinctive fever, due to absorption of leucomaines derived either from urine, or tissue, or wound decomposition, or from all combined. He observed in his practice that as long as a patient had complete retention of urine, he was comparatively safe; but as soon as he was relieved, and urine began to flow through the urethra, which perhaps had been contused by instruments, he was in danger of urethral fever. He also noticed that the trouble was most liable to follow wounds made on the floor of the urethra, as urine stagnated in them and underwent decomposition. He then took a number of cases of sub-pubic urethral strictures, unfitted for treatment by dilatation, and performed internal urethrotomy; and as soon as all obstruction had been removed, and a full sized grooved staff could be passed into the bladder, he placed the patient in the lithotomy position and did a median cystotomy. By this means he prevented the urine from coming in contact with the wounded urethra, and secured drainage so perfect that decomposition was impossible. Urethral fever followed in none of these cases. Finally, in cases where free drainage was impracticable, he observed that the admin-

istration of drugs, such as boracic acid, salol, and quinine, which were excreted by the urinary apparatus and, by their germicidal action, rendered the urine less liable to fermentation; and the thorough irrigation of the bladder and urethra with antiseptic solutions, markedly lessened the liability to urethral fever.

From these facts he concluded—

1st. That the presence of urine in relation to a recent wound is necessary for the production of urethral fever.

2nd. That the mere contact of urine with a wound is not sufficient for its production.

3rd. That the retention of urine within the area of a recent wound is almost invariably followed by its development in a greater or less degree.

4th. That the liability to urethral fever is greatly diminished when the urine is sterilized by local or general means.

5th. That the retention of fresh urine, blood, and the debris of damaged tissue in the confines of a recent wound for a certain time, at a temperature of about 100° F., could hardly be possible without chemical changes taking place.

6th. That there is a common origin for urethral fever, is rendered probable by the uniformity of the symptoms attending it, which, though differing in degree, are identical, whether following a surgical operation, or an accidental wound.

Whether the views of Mr. Harrison are correct or not, I do not pretend to say. But this much is certain: The treatment which logically follows his etiology is now generally accepted; and by following it, urethral fever, from the introduction of an instrument, can be rendered as infrequent as surgical fever following a wound has been by the principles of Listerism.

This is well-illustrated by comparing the writings on the subject of twenty years ago with those of the present time,—the old authors dwelling minutely on the curative treatment of the disease; the modern, on the preventive.

The *prophylactic treatment* consists in making a careful

urinary analysis, as, if any pathological condition of the kidneys is present, an operation on the genito-urinary organs will be attended with great risk, and should be either avoided or undertaken with the greatest circumspection. If trouble is anticipated, rest in bed for two or three days prior to the operation with hot Sitz baths morning and night and gentle purgation are often desirable. For a day or two before the operation, the patient should take large doses of boracic acid, salol, quinine, diuretin, methylin blue, or some other drug which is eliminated by the urinary organs and renders the urine aseptic, thus preventing its decomposition and the formation of the leucomaines, whose absorption causes urethral fever. The value of this mode of treatment can be inferred from the report of a recent writer, who records forty cases of internal urethrotomy in which only one case of urethral fever occurred, and that in an instance where the sterilization of urine by the administration of boracic acid had accidentally been omitted.

Quinine, as a preventive agent, seems to act even more powerfully than boracic acid, despite the opinion of so eminent authority as Sir Henry Thompson, who says: "I have not the smallest faith in quinine to prevent, postpone, or modify an attack of acute or chronic urinary fever. There is not the slightest analogy between an intermittent of malarial origin and a paroxysm of urinary fever, and not the least reason for supposing that quinine, as a specific for the former, should therefore be a remedy for the latter."

Quinine, however, is not given from the supposed resemblance between the symptoms of malaria and urethral fever, but because it is one of the most powerful antiseptics known that can be internally administered, and is largely excreted by the kidneys; hence its use is based upon the soundest therapeutical reasons.

However efficacious the administration of these internal drugs has proved, they must not be relied upon exclusively. The experiments of Pettit and Wasserman have shown that the healthy urethra always contains micro-organisms capable of decomposing urea; hence, just before an operation,

the bladder and urethra should be thoroughly irrigated with some antiseptic solution. Another frequent source of trouble is the use of a septic lubricant. Needless to say it, as well as the surgeon's hands and the instrument employed, should be perfectly sterile.

To those who have never seen an alarming or fatal case of urethral fever the precautions mentioned may seem unnecessary; but it must be remembered that here, as in other branches of surgery, an ounce of prevention is worth a pound of cure, and that to avert a complication which might endanger a patient's life no means should be neglected, nor trouble spared.

I have little to say of the *curative treatment* of the disease. In mild cases, all that is usually necessary is confinement in bed, the application of hot baths during the rigor, and the administration of quinine.

If suppression of urine occurs, try to establish vicarious elimination of its constituents by the bowels and skin. Apply dry cups over the kidneys and follow with fomentations of digitalis leaves. Later, teaspoonful doses of the infusion of digitalis may be given. Sustain the strength by concentrated foods and stimulants. If, despite these measures, the case continues to grow worse, a median cystotomy should be performed, thus giving free drainage and preventing the further formation and absorption of leucomaines, and frequently the kidneys will resume their function.

Pepsin is undoubtedly one of the most valuable digestive agents, *provided a good article is used*. Robinson's Lime Juice and Pepsin (see advertisement page 28, this number) we can recommend as such. The manufacturers of this palatable preparation use the purest and best Pepsin, and every lot made by them is carefully tested, before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

ART. VII.—Laparotomy in Puerperal Septicæmia; Multiple Secondary Collections of Pus; Death on the Third Day.

By J. WESLEY BOVEE, M. D., of Washington, D. C.

OBSTETRIC SURGEON TO COLUMBIA HOSPITAL.

The subject of laparotomy as a *curative procedure in cases of puerperal septicæmia* is attracting no little attention. Since the act of operating in the peritoneal cavity has been stripped of the larger part of its dread, and superstition has lost its foothold concerning that region of the human body, the indications for laparotomy (at least explorative), have gradually increased in number, and the field for such work is constantly widening.

The opposition to the different abdominal operations has in every one of them been stubborn at first, and, with a gradual lessening, has almost disappeared.

It is not a very long time since the treatment of puerperal septicæmia was first considered as in any way indicating or demanding exploratory incision. This may in part be accounted for by the scarcity of such cases, since the adoption of clean methods in obstetric practice. Since the banishment of filthiness in this class of work, septicæmia is rare; and as those cases that can be benefitted by laparotomy are only a part of those suffering from this disease, the field for such surgical treatment is relatively small.

I do not wish to be understood as saying that all operators are satisfied that any form of septicæmia warrants us in subjecting a woman to this operation, but I think the far larger portion favor the operation in selected cases.

The conditions present that indicate the operation are not many; but when they do exist, no time should be lost before performing laparotomy. If we hesitate, it may be too late; for septic absorption may be rapid, and by the time the surgeon operates, he finds the patient is beyond hope of recovery. The operation may be required early or late, as regards the septicæmic manifestation—according as

the spread of the disease outside the uterus progresses or appears.

The disease may remain in the endometrium for some time before any tenderness or other evidence of involvement of other structures is present. In such cases, the disease must be combatted *per vaginam* by washing out, swabbing, or curetting, etc. But when we feel a mass forming in the pelvis along the broad ligament, on one or both sides, and see that these masses increase in size rapidly, it is time to decide that their removal is advisable. Especially is this the case if the temperature remains high and the patient's strength is wasted. It is our duty to now inform the proper persons that surgical procedure is necessary, and must not be delayed.

It is to illustrate this very point that I insert in this paper the history of a case that was in my service at Columbia Hospital for Women in this city. The operation should have been done about the time I suggested it to the patient. She refused to submit to it until several days later, when it was too late to prevent her death.

Last March, I operated on a woman the forty-second day after labor, that had a large mass in the pelvis and a large amount of pus in the mass, as well as a few sacculated deposits of pus at various parts of the abdomen from inflammation—*not absorption*.

In this case the septicæmia, peritonitis, etc., occurred later in the puerperium, and an operation was not called for until about two days before it was done.

The patient is now working as a servant in this city, and enjoys good health.

She had the advantage of an operation early—*before absorption of pus, secondary deposits, etc., occurred*, and therefore recovered.

The *second one* was not so fortunate, and by declining to have the operation done at the proper time, allowed herself to pass to a fatal condition before laparotomy was done.

The history of my second case of laparotomy for puerperal septicæmia was as follows:

L. F., æt. 25 years; white; single; multipara; was admitted in labor January 22, 1892; head presented in left occipito-

anterior position; labor normal; perineum slightly lacerated and closed by chromicized cat-gut.

On the sixth day the temperature suddenly arose to 105° Fah., and did not fall below 103° Fah. for the next few days.

On the ninth day (January 31), the lochial discharge was very offensive, and the uterus was washed out and swabbed with a 1 to 4 solution of H_2O_2 . All odor disappeared, and the foul discharge did not remain long.

An examination made at this time revealed a large and tender uterus, a large mass to the right side thought to be a pus collection, and a smaller one of the same character on the left side.

Her pulse was now ranging from 100 to 120 per minute; and believing her condition grave, I advised her to have an exploration made; at the same time acquainting her of the necessity for it, and of the dangers attending it. She absolutely refused it, and gradually grew worse—the temperature, pulse, strength, and other symptoms indicating a fatal ending in the near future.

On the twenty-first day of her puerperium, she consented to a laparotomy, which was done next morning.

This day (the twenty-first), she was reduced almost to a skeleton, and her temperature was 105.2° Fah. Her urine was frequently examined during the preceding treatment, and was always pronounced normal.

February 12th.—Operation, 10:30 A. M. (sixteenth day after development of fever). The uterus was found to be fully as large as it was the sixth day after labor; to the right of it a rounded tense sac, about four inches in diameter, and which proved to be an abscess of the right ovary. Above this, and formed by it, the cæcum and the upper part of the colon, was another abscess, containing about an ounce of pus, which escaped in tearing adhesions to the ovarian abscess. This left a large round suppurating surface two inches in diameter on the wall of the intestine; and as its edges would not hold a stitch, I contented myself with simply cleansing the surface and trusting to adhesions to remedy the defect. The vermiform appendix was doubled upon itself and adhered to small intestines. The omentum was quite firmly attached to the right ovarian abscess. Both Fallopian tubes were apparently but slightly diseased, but the left ovary was fast approaching the size of the right one and full of pus.

The uterine appendages were removed, and the abdominal and pelvic cavities washed out with hot water. The wound was closed, and a drainage tube inserted.

The patient did well during the first twenty-four hours, at the end of which time my colleague, Dr. Stone, took charge of her, as I was obliged to leave the city.

During my absence, she became much worse—diarrhœa, passage of pus through drainage tube, much increased pulse and hectic appeared. She rapidly failed, and sixty-three hours after the operation died.

Autopsy, fifteen hours later, revealed the following conditions: Intense peritonitis; bowels greatly distended with gas; several ounces of pus found lying loose in hollow of sacrum. This pus came from multiple abscesses in the walls of intestines. Uterus infiltrated with pus, and very friable. Both kidneys hyperæmic, and the larger calices containing pus.

Liver—fatty, degenerated; spleen much enlarged, and semi-fluid in consistency; heart undergoing fatty degeneration, and its chambers expanded—especially the left auricle, whose walls were exceedingly thin; lungs had undergone hypostatic congestion over bases.

Diligent inquiry failed to find any knowledge of any cases of the kind in the District of Columbia other than my own. Therefore I do not expect to receive the support of many physicians in this section of the country; but I know all who have had experience in this class of cases will concur in what I have stated about such cases, especially the treatment.

The loss of this case does not count against the advisability of laparotomy in puerperal septicæmia, for she died of putrid infection, which was present before the operation was done.

My first case was done before infection occurred, and was saved, though all present had very little hope of her recovery. †

916 *Fifteenth Street, N. W.*

ART. VIII.—Eight Cases of Fissure and Ulcer of Rectum, with Remarks †

By **LIVIUS LANKFORD, M. D.**, of Norfolk, Va.

Since February 10th, 1891, I have seen eight well-marked cases of fissure and ulcer of the rectum. And yet, in a practice of fourteen years, I can recall only eight or ten cases—previous to the above-mentioned eight—which I have diagnosed and treated as such. I am now perfectly satisfied, however, that during this period I have failed many times to discover the rectal lesion—one or the other, or both, as the cases may have been, for two reasons: 1st. Unfortunately, I so often accepted the patient's diagnosis of his or her case, and directed a treatment for hæmorrhoids. 2nd. When I did examine, it was not in a thorough and systematic manner, and I failed to discover the real cause of suffering. Not a few physicians could give the same reasons, as these eight cases will show.

There is very little literature on this subject in the books on surgery. I presume some works devoted especially to diseases of the rectum, treat the subject more fully; though as I own but one little treatise on the subject, I am not prepared to say how much importance authors give it.

The general impression seems to be that rectal fissure and ulcer is so simple a matter, and the cure so easily affected (which is really true) that we fail to recognize how it wears out the patient's health and strength in a remarkable manner. The constant pain and irritation to the nervous system are more than most persons can endure.

Most of the eight cases I am about to report were non-residents of Norfolk. Two came to me so ill, and suffering such intense pain, that they felt quite sure they had cancer of the uterus, when in reality they had only a small ulcer of the rectum. The husband of one of these (Mrs. C., æt. 44, Nansemond Co.), had been informed by her family doctor that she had cancer of the cervix. I found only a simple erosion of cervix. Both left "The Retreat" entirely

† Read before the Norfolk (Va.), Medical Society, February, 1892.

relieved of all rectal pains, and are now in excellent health, one having gained over twenty pounds in weight.

A third case, Miss W., æt. 24, through delicacy of feeling, had for over three years concealed her "*uterine disease*" from her attending physician. A careful examination of uterus twice (second time under chloroform), satisfied me that the uterus and appendages were normal. On digital examination of the rectum, I at once outlined two polypi—one an inch long, the other not quite so long; then with a speculum I discovered, dorsally, a club-shaped fissure or ulcer, with its apex extending up to the attachment of the longest polypus, which dangled and fitted perfectly in the fissure when the sphincter was closed. This fissure, like most of the others, had a grayish-colored floor, with well-defined hard edges. The young lady had many anomalous symptoms, such as pain and numbness radiating down the leg to her feet; retention of urine; almost constant pain in the back and loins, extending from the time of one defecation to the next. For weeks she had been postponing her bowel actions as long as possible, on account of the intense agony she always experienced when the desiccated and hardened feces passed over this fissure. Her relatives felt sure she was a hopeless invalid. Her mother came with her to "The Retreat," and when I assured her there was nothing like paralysis, as her doctor had suggested, and I felt quite confident that her daughter could be entirely relieved, she was very skeptical. She left in two weeks entirely cured, and now weighs over 140 pounds; is in perfect health.

The next case was a gentleman, a Methodist minister, who had been a great sufferer for ten years. He stated he had "*blind piles*," and that over a dozen doctors had treated him. A close examination of his rectum (the first in ten years), revealed a very insignificant but deep crack situated at the anal orifice over the external sphincter, and involving the skin. I also discovered a small, three-quarter inch polypus high up, which gave no pain, though I snipped it off. This patient described his suffering upon defecation as agonizing.

It is very evident why such an insignificant little fissure could so prostrate him and produce such intolerable suffering. It was because of the great mobility of the external sphincter, and because the rectum and anus are abundantly supplied with branches from the sacral and pubic plexus of nerves. The location, therefore, and not the size of a fis-

sure or ulcer, will determine the amount of suffering of a patient. Hence the importance of *close, ocular* examination of the anus, and *never* be content to accept his "*blind pile*" diagnosis and treat it.

My patient went for two years without an examination. I have within the past few days received a letter from this gentleman from Nansemond Co., consulting me in regard to his *new wife's front* passage, and in this letter he states, "my back passage is in perfect order since the operation."

The fifth case was a noted "Madam," who keeps a house of prostitution in this city. She came to be treated for uterine trouble. She said several physicians here and two in Baltimore had treated her womb. I found a retroverted uterus, chronic cystitis, and spasmodic pains in micturition. I thought these sufficient to account for her haggard and wasted condition. I sent her to "The Retreat," and not for ten days after seeing no improvement, did it occur to me that I had failed to examine the rectum. When I did examine it, I found a circular ulcer about one inch above the internal sphincter, as large as a silver quarter. I am quite sure the muscular fibres were laid bare in the ulcer. It was exceedingly irritable. I am also sure this was a syphilitic ulcer, as it made but little progress until after she was placed upon iodide of potash, and mercury. She left "The Retreat" in four weeks, not entirely cured, but greatly relieved. She comes to my office once a week now for treatment.

As the treatment was different in this case from all the others, I will state what I did. I made applications of nearly everything I could think of—nitrate of silver, carbolic acid, sugar-of-lead, etc. But repeated curettings did more to break down the well-defined, almost horny edges, than anything else I did. Instead of a twenty-five cent size ulcer, she now has a contracted cicatricial spot, not entirely healed, but healing slowly, and she thinks she is almost well.

I might state just here, that over a month before I saw this patient, a prominent steamboat captain, who has his headquarters in Norfolk, came to consult me about a "terrible case of piles." I found no hæmorrhoids, but the largest fringed margin of the anus I ever saw, and between the external and internal sphincters, an ulcer, if anything, larger than the woman's above mentioned. After informing him of his serious condition, and the long time he would probably have to remain quiet, he became alarmed and ran

away from me, first to Richmond; and not being benefitted there, to Dr. Kelsey, of New York. His brother-in-law told me last week he had spent \$1,500, and while greatly benefitted and now at home, he was not entirely relieved. I told his brother-in-law before he left me my opinion was that it was a syphilitic ulcer. Dr. Kelsey confirmed this opinion.

This was one of the eight cases of rectal ulcers.

The other two cases were fissures. One a Baptist minister who had a polypus dangling in the fissure. He had been treated for several years for "blind piles;" no examination had ever been made.

The eighth, and last case, was the wife of a prominent merchant of the city, who had been treated for more than two years by a homœopathic with electricity and pessaries for uterine trouble. I found no uterine disease. We had never examined the rectum. It was only necessary in this instance to gently open the anus with my thumb and index finger to see the fissure plainly. When I told her to bear down, the pain was so great it would throw the anus into a state of alternate contraction and relaxation. She recognized at once, as I did, that there was her trouble.

Treatment.—There is no operation in all surgery so simple as the one for the almost certain cure of fissure. The ulcer is not so easily relieved.

If the edges of the fissure are well-defined and hard, I first trim them down with scissors curved on the flat. Now, as to the incision. If it is a case of long-standing, and the sides and floor of the fissure are of a grayish color, and the muscle beneath irritated and hypertrophied, nothing short of complete division of the external sphincter, and then dilatation with the thumbs, is sure to obliterate the fissure. I failed to relieve my first cases years ago, because I was too timid, and dilated only, or merely scratched through the fissure with the knife. If only a portion of the fibres of the sphincter are divided, there is danger of too rapid union before the fissure heals, and you may have your work to do over—that is, if the patient will allow you. If you fail to relieve at the first operation, they are apt to run away from you to a specialist.

Six of these eight cases were entirely cured and remained so. Not one had any incontinence of fæces. Of course the

incision should be made with a steady hand, and at right angles to the muscular fibres. Such an incision will always heal (except in a tubercular patient), with a nice, narrow scar.

The next most important point is to *compel* the patient to keep the bed until the wound completely heals; for if he gets out too early, the wound may not close, or *far* worse, unhealthy ulceration follow, which will be much harder to cure than the fissure. I place a small piece of fine lamb's wool (not cotton), in the cut for twenty-four hours only. I confine the bowels for three or four days after the operation, when I introduce a suppository of a grain of aqueous extract of opium well up in the rectum, to relieve the throbbing.

My only excuse for reading this little imperfect paper before you, gentlemen, is the hope that it may cause us to examine the rectum oftener and more carefully in the future, and not be content with the diagnosis of the patient, who comes with the statement that he has blind piles and wishes a prescription, as several of these eight told me, and had been telling other doctors for years.

If I learned nothing else from Bantock, of London, and Martin, of Berlin, they showed me the importance of examining the rectum more frequently and systematically than I had ever done before.

How to Administer Iron.—The officinal tincture of chloride of iron is the most valuable of the iron preparations therapeutically. The practical difficulties attending its administration have been its disagreeably astringent taste, its corrosive action on the teeth, and its constipating action. Dr. G. W. Weld's experience in dentistry led him to recognize its virtues as a stimulant resource for patients after the strain of the dentist's work. Repeated experiments to obtain a formula free from the objectionable features resulted in the preparation of a highly palatable syrup, with all the therapeutic efficacy preserved. This has been extensively tested and placed in the hands of Parke, Davis & Co. for manufacture. It is entitled Weld's Syrup of Iron Chloride (P., D. & Co.'s).

ART. IX.—Wound Fever—Complications, Cause, and Prevention.*

By **LUTHER SEXTON, M. D.**, of New Orleans, La.

LECTURER AND CLINICAL INSTRUCTOR ON MINOR SURGERY IN MEDICAL DEPARTMENT
OF TULANE UNIVERSITY, ETC.

I will call your attention this evening, gentlemen, to the subject of wound fever or sepsis, or what the older textbooks would designate as septicæmia, or pyæmia.

Under the head of blood poisoning we have two disease conditions: (1.) Non-infecting septic intoxication due to a chemical poison, the result of some putrefactive process outside of the body. (2.) A septic fungi enters the circulation, develops and multiplies within the tissue. I will not speak of the reactive fever which follows traumatism within a few hours of their infection, and subsides under proper surgical treatment after forty-eight or seventy-two hours; this, however, is the only variety of fever with which we would have to deal if strict antiseptic precaution could be carried out in every surgical case, or in every lying-in chamber, for I would impress upon you the idea that septic wound fever and puerperal fever are one and the same condition.

A decomposing clot of blood, or portion of retained placenta in the uterus, with micro-organisms, is as fertile source of septic intoxication as would be the most putrid wound from any other source. Septic infection may arise from a trivial wound.

Of the two distinct forms of septic intoxication—one the result of preformed ptomaines entering the circulation from some nidus or putrefaction, set up by the action upon the wound of various bacilli of putrefaction. If the first inception of poison from this local centre is not sufficient to overwhelm the vital powers, we may expect by heroic disinfectant treatment of the infecting wound and by stimulants and germicidal remedies internally to prevent a fatal termination.

* Clinical Lecture delivered in the Medical Department, Tulane University, etc.

The other variety of sepsis seems to depend directly upon micro-organisms which enter the circulation either through the respiratory or alimentary passage, maintaining the power of development within the blood and lymph streams and tissue.

In the microscopic examination of blood and tissue infected with micro-organisms, we find numerous varieties of germ life; but the pyogenic germs play the most important part in the development of sepsis. Many of the germs which we find in the secretions of wounds, are non-pathogenic (harmless); while flourishing in the same soil may be found the micrococci and bacilli of the most virulent type. Germ life, in this respect, however, is not different from vegetable life; for the same garden soil which produces the various vegetables for food, will also produce in luxuriance the deadly night shade (*atropa belladonna*). Prof. Bergman held that this septic poison of wound fever was a chemical alkaloid which he succeeded in crystallizing from putrid fluids, designating this alkaloid *sepsica*, which being introduced into a subject always resulted in pyrexia, wound fever, septicæmia, all having for their origin the same cause, which is either micro-organisms or ptomaines, the product of micro-organisms.

This diseased condition is only found after wounds which have not been treated strictly antiseptically; hence more often after wounds or injuries of the peritoneum, uterus (after delivery), or compound fracture, with extensive laceration. In pyæmia, the staphylococci are conveyed in the blood and lymph streams from one infected point to another, and are lodged as emboli at the bifurcation of vessels or in the parenchyma of the kidneys, liver, and lungs, thus setting up new foci of suppuration, or the metastatic abscesses of older surgical writers.

It is impossible to comprehend this subject fully without some explanation of the germ theory of disease upon which the disease depends. I will, therefore, hurriedly call your attention to a few facts in connection with this fertile subject, upon which all the advance of modern surgery so

largely depends. All antiseptic surgery, all the grand strides in treating wounds, are based upon the theory of the development of micro-organisms in the newly-made wound or traumatism.

The pathogenic organisms with which we have mostly to contend belong to the order of micrococci (spherical) and bacilli (rod-shaped). These germs are capable of attacking living tissue, multiplying in them at the expense of the tissue. They flourish alike in the blood and lymph streams, thus permeating the whole system; they may be admitted into a wound direct from atmospheric air, or find their way into the general circulation and thence into the wound through the lungs and alimentary canal. When they find suitable soil, warmth, and moisture, they settle there, producing ptomaines, which serve as the irritant to the wound, producing violent inflammation. Fifteen hundred of these micrococci could be placed upon a pin's head. I mention this that you may perceive that we are dealing with infinitesimal objects. Micrococci are found singly or in pairs, chains or colonies; they are from $\frac{1}{25000}$ to $\frac{1}{10000}$ in diameter; they multiply rapidly by cell division. They are held together by zooglæa. Bacilli are rod-shape; their length is double their breadth, and are slower in movement than the micrococci; we can reproduce them in culture fluids; they have a remarkable resisting power to chemical re-agents, freezing, heat, and drying; hence the many failures in what is thought to be antiseptic surgery. The strongest solution of carbolic acid has little effect in destroying them. In corrosive sublimate solution, 1 to 1,000, they are immediately destroyed. The germ theory of septicæmia and pyæmia is based upon the idea of these saprophytic micro-organisms entering a wound in which there are retained secretions setting up putrefactive changes, and producing certain irritating local substances known as ptomaines, the absorption of which into the system develops septic intoxication. The pus forming micro-organism is called staphylococci pyogenes aureus.

I have been compelled to burden your memories with a

great many technical and high-sounding phrases, and to go more or less into short details of the germ theory of disease; but a correct understanding of the pathology of a disease is essential before its scientific treatment can be accomplished.

It is needless to elaborate upon the treatment of disease which is practically incurable, as is well-developed septicæmia. In no disease is the adage that "an ounce of prevention is worth a pound of cure" more fully established than in the cases under consideration.

The septic condition depends upon micrococci and bacteria, with proper warmth and moisture, which the wound supplies, for their development. The want of any of these elements will prevent sepsis. Any albuminoidal substance, as blood or serum, may be kept in a vacuum indefinitely without decomposition. Fresh meats are shipped from one country to another without putrefaction by refrigeration, or the absence of warmth. Dried fish and meats are preserved for an equal length of time for want of moisture. The exclusion of micro-organisms from the wound or affected part is equally preventive of its diseased condition.

The natural condition of a wound, viz: bruised tissue, blood and serum, warmth and moisture, are the natural conditions that invite infection from diseased germs. Myriads of spores and germs infect the atmosphere of crowded populations, especially where many diseased subjects are crowded together, as in hospitals and asylums. Impoverished and badly nourished subjects, any blood dyscrasia, or constant drain from confinement, and especially diabetes mellitus, predispose in the formation of septic infection.

The modern and most successful treatment of wounds is based upon the prevention of infection and fermentative processes in wounds, and is accomplished by the same methods that we preserve organic substances—with one notable exception, viz., freezing. Free drainage and exsiccation, removal of any germs from wound by 1 to 3,000 bi-chloride irrigation, impairing the soil for germ development by dry dressing, no tension and perfect cleanliness—such are the best

preventive measures. But we are not allowed to select all our cases, and we will be called to treat septicæmia or pyæmia after it has already developed under such circumstances. We cannot afford to do nothing; still our best methods of treatment are followed by a frightful mortality.

Violent sepsis is usually ushered in with chill or chilly sensation; at the same time the temperature is high, probably 101° to 105° F.; this fever is followed by drenching sweat. Pyrexia may occur several times daily; pulse runs very high, from 120 to 160 per minute; restlessness, headache, delirium, with scanty, high-colored urine; respiration is rapid and shallow, tongue dry-coated, sordes on teeth, usually constipation in the start, and profuse diarrhœa towards the close of the disease. Metastatic abscesses in the liver, lungs, kidneys, or lymphatic glands, are soon followed by collapse and death. In pyæmia, or more favorable cases, the symptoms are not so violent. Metastatic abscesses are not so liable to occur—a more favorable termination may be expected.

In all such cases drain and disinfect the wound; freely and early open all collections of pus—combatting high temperature, etc., with germicidal agents and supporting treatment, until nature may be assisted in throwing off the poison. These cases undergo resolution or result fatally in from six to ten days. Repeated rigors, formation of thromboses and emboli, and a temperature above 105° or 106° F., are the worst omens.

It is usually well to begin the treatment with a mild purgative—either a saline, a vegetable, or calomel and soda, if tongue and skin indicate it. Render the wound sterile by 1 to 1,000 bichloride irrigation. If the infecting point is some decomposing placenta or blood clot in the uterus, thoroughly irrigate it with boric acid solution, or Thiersh solution, after removing all foreign bodies from the womb. See that no discharges are retained. Eliminate all ptomaines by strict antisepsis about the wound. Dust the wound locally with equal parts of boracic acid and iodoform, renewing the dressing twice daily if there is much

discharge. Exalted temperature is sometimes brought down by ten grain doses of antipyrin, or fifteen grain doses of quinine. In using these agents always keep in view their effect upon the heart, and the tendency they have to increase diaphoresis. Opium, grain $\frac{1}{2}$; extract belladonna, grain $\frac{1}{4}$, in pill, if restlessness or pain call for it.

Liquor sodii, chlorinati, bichloride of mercury solution, 1 to 2,000, are very serviceable to apply on a warm poultice to ulcer if effusive. Ergot, atropia, and tincture of iron, are valuable to allay the copious perspiration in this disease.

Nutritious diet, in small, but often repeated quantities, are essential; even more than medicines are they to be relied upon. Raw beef juice, milk punch, and eggnog, should form the principal part of the dieting. The sulphates have been recommended in these disorders, but clinical experience does not bear out the claim. As I have told you before, the best treatment for sepsis in any form is prevention; remove all sources from which it can arise, and you will serve your clients much better than by attempting to accomplish the impossible feat of curing a well-developed case of septicæmia, which is rarely if ever done.

ART. X.—A Contribution to the Study of Parietal Foramen.

By W. M. BARTON, M. S., of Washington, D. C.

In studying the anatomy of the parietal bone in *Gray's Anatomy*,* we find the following sentence: "At the back part of the superior border, close to the sagittal suture, is a small foramen, which transmits a vein to the superior longitudinal sinus, and sometimes a small branch of the occipital artery. Its existence is not constant, and its size varies considerably."

This leads to a further examination of the subject, and the following quotations from text-books on anatomy will show the teaching of various authors. Leidy writes:†

* *Gray*. *Anatomy, Descriptive and Surgical*. 11th Ed. London, 1887. Page 131.

† *Leidy*. *Elementary Treatise on Anatomy*. 2nd Ed. Philadelphia, 1889. Page 102.

"Near the posterior-superior angle there is frequently a small aperture, the parietal foramen, which communicates with the diplöe, and often also with the interior of the cranium for the transmission of a vein."

Holden states:‡ "Close to the upper margin, and placed at about the junction of the posterior fourth, with the anterior three-fourths, in most skulls is a hole called the parietal foramen for the transmission of a vein from a sinus which lies in a groove to be described at the upper margin of the internal surface."

Quain and Sharpey,§ wrote in 1849: "Its position is exceedingly variable." In 1867, they wrote:* "Near the posterior and upper angle close to the middle line, there is often a small perforation of variable dimensions, the parietal foramen, which transmits a communicating vein."

Wilson states:|| "The foramen is often absent."

Nancrede teaches:† "Near the posterior superior angle is often a parietal foramen transmitting a small vein."

Macalister states:‡ "A little above this last angle and close to the sagittal suture is a small parietal foramen transmitting a small vein." (The angle referred to is the lambdoid.—B.)

Having shown the teaching of works on anatomy at hand, we will submit the following table for the consideration of the profession. This table is the result of an examination of the parietal foramen of one hundred and twenty-five skulls:

Foramen present on both sides.....	48
“ “ “ right side only.....	37
“ “ “ left side only.....	23
“ absent on both sides.....	17

125

‡ *Holden*. Human Osteology. London, 1887. Page 45.

§ *Quain and Sharpey*. Human Anatomy. Philadelphia, 1849. Vol. I. Page 119.

* *Ibid*. 7th Ed, London. 1867. Vol. I. Page 32.

|| *Wilson, E*. System Human Anatomy. Philadelphia, 1859. Page 60.

† *Nancrede*. Essentials of Anatomy. Philadelphia. 1889. Page 26.

‡ *Macalister*. Text-book Human Anatomy. London. 1889. Page 217.

Foramen—One right side and two left side.....	2
Two “ “ “ one “ “	4
“ “ “ “ two “ “	1
two “ “	3

As will be seen from this table, the foramen is absent on both sides in seventeen skulls, or in 13.6 per cent.; present on both sides in forty-eight, or 38.4 per cent.; present on the right side only in thirty-seven, or in 29.14 per cent.; present on left side only in twenty-three, or in 18.4 per cent.

While the number of skulls examined is much too small upon which to base conclusions, still we think that were the skulls of the dead houses and the dissecting rooms examined upon this subject and a strict record preserved, its presence would more often be recorded.

Washington Asylum Hospital.

ART. XI.—Treatment of Pneumonia.

By J. I. DARBY, M. D., of Columbia, Ala.

The doctor who hopes to attain even fair success in the treatment of pneumonia must learn to pay large attention to small symptoms.

Every man of much experience in general practice has, doubtless, found himself at times “badly mixed” in his efforts to find out where his patient was—often wholly unable to differentiate between the symptoms of the different stages, and occupying the position of “the bull in a china shop;” for if you cannot ascertain in what stage the disease exists, you cannot intelligently direct your treatment. Nine times out of ten, remedies administered under these conditions do decidedly more harm than good. It is best, in such a state of affairs, to let the *vis medicatrix naturæ* have a chance at the patient, and the doctor play the rôle of nurse, keeping the sanitary and hygienic surroundings properly adjusted.

Authors have classified pneumonia as croupous and catarrhal (or lobar and lobular), characterized by three more or less distinct stages—each having its characteristic symptoms and peculiar anatomical lesions.

Croupous or lobar pneumonia is an inflammation of one or more lobes of the lungs, and is usually ushered in with a chill at night. Though there may be exceptions to the nocturnal character of the invasion, the great majority of cases begin in this way. This chill is usually soon followed by pain of a sharp lancinating character, in the neighborhood of the nipple, or in the lower anterior portion of the lungs. Sometimes, however, it is felt in the posterior portion of the chest, and gradually shoots up into the shoulder and neck. The patient finds it difficult to get a long, deep-drawn breath, and, in his efforts to avoid pain, leans over to the affected side, and breathes as “shallow” as he can. The temperature, in most cases, runs up, within a few hours, to 102.5° F. or more, and the skin becomes very dry and hot. The secretions are decidedly diminished, and the patient complains of a dry mouth, and drinks water quite freely. There is usually, though not always, a dry, hacking cough and severe headache, with more or less uncomfortable feelings about the small of the back. Inspection reveals diminished mobility of the affected lung, with increased respiratory movements on the sound side. Respiration is decidedly increased in frequency, and is of a jerking character. By palpation during the first stage, we find the vocal fremitus exaggerated; if a few hours have elapsed between the initial chill and the arrival of the physician, which is usually the case in a country practice, the air-cells have become filled up, and thereby made better conductors of the voice. We also find the skin hot and dry, and feel the vigorous action of the heart against the chest-wall on the left side. Percussion reveals more or less dullness from the very earliest stage of the disease, and increases as the second stage approaches. Of course, if the inflammation be central, or only a very small area of lung involved, the percussion note may be but slightly exaggerated, if changed at all. But when the

anterior or outer lobes are the seat of the engorgement, the dullness will usually be marked in a few hours after the onset of the attack. Auscultation here acquaints us with crepitant râles at the end of each inspiration, which are supposed to be produced by the separation of agglutinated cell-walls, or by viscid exudation and air mixing in the cells. Of course there may be present adventitious sounds, having their origin in complications; but the above-mentioned symptoms, together with a weakened respiratory murmur, constitute the principal evidences of the first stage of croupous pneumonia, as revealed by auscultation.

When the second stage has been reached, the patient complains still of severe pain in the region of the inflamed portion of the lung, with high fever, increased respiration, dry, hot skin, and cough, with expectoration of bloody or "brick dust sputa." The affected portion of lung usually gives out a decidedly dull note, and the breathing is of a bronchial character—the vesicular respiration having almost disappeared with the crepitant râles from the diseased lung. The patient complains more or less of suffocative symptoms, and frequently has to be propped up in bed to enable him to breathe with any degree of comfort. The chlorides disappear from the urine, and only appear again when convalescence has been well-established. The patient often complains of nausea, and exhibits decided anoxeria and insomnia.

The third stage, or that of gray hepatization, is a stage of resolution in which there is a gradual return to the normal healthy conditions; the rusty sputa begins to clear up, the dull percussion note gradually becoming more tympanitic as the air again enters the cells, and the bronchial breathing gives way to vesicular respiration, and the temperature declines, while the chlorides re-appear in the urine, and the anorexia gives way to a relish for food.

Catarrhal, or lobular, or broncho-pneumonia, differs from the croupous variety in that it is more gradual in its onset, and usually supervenes on a catarrhal condition, which has been in existence for several days, and generally involves a more

circumscribed area of lung than the lobar variety, which always involves one or more entire lobes. This is the form of the disease usually observed in children under two years of age, and in very old people; and, in my opinion, is, in every instance, preceded by symptoms of cold. Owing to the circumscribed area of inflammation, the physical symptoms are not always well-marked; and if the physician is a careless diagnostician, he may overlook the true nature of the disease and diagnose it bronchitis or catarrhal fever. Here the râles are more difficult to distinguish in the pneumonic areas, on account of the widely diffused bronchitis giving out its characteristic sounds at various portions of the affected lung.

Percussion does not afford the satisfactory evidence derived from that means in the lobar variety; yet it reveals a state of solidification never found in simple bronchitis, and helps us to avoid making the mistake in diagnosis of that disease.

Catarrhal pneumonia, like the lobar variety, is an infectious constitutional disease, with a local inflammatory condition sustaining about the same relation to it that the inflammation of Peyer's patches sustains to typhoid fever.

The causes which produce this disease are supposed to be the presence in the system of a microbe known as the *pneumo-coccus*, and a peculiar constitutional condition favorable for the multiplication of these little germs, which finally, by some unknown process of multiplication in the system, becomes sufficiently numerous and powerful to produce the local inflammation, together with the peculiar constitutional systemic symptoms. The disease prevails more extensively during the winter and early spring months than any other season of the year; and is, therefore, thought by many to be due entirely to the effects of cold. I have no doubt, to a certain extent, this is true; for by this means the mucous lining of the air-passages are inflamed and made suitable soil in which to grow the destructive pneumonic microbe. But exposure to cold alone will not produce the disease; for out in the salty winds of the sea, and on the highest

snow-capped mountain-tops, the disease is never seen, except it be carried there from the warm in-door homes of those who have recently gone out with the germs in their systems.

The prognosis will depend upon the area of lung involved and the constitutional ability of the patient to resist the effects of the disease. Age, of course, is to be taken into consideration, as well as the extent of lung involved; old people seldom recover from it, while the danger is greatly increased by both lungs being involved. Young children and people under middle age usually recover if properly taken care of and treated intelligently from the onset. Especially is this true in the temperate climates where vicissitudes of weather are not so frequent and marked. Still, under all forms and methods of treatment, and in all countries where the disease appears, a certain per cent. of cases are lost; but in the Southern portions of the United States the mortality rate among otherwise healthy individuals below middle age should be quite low.

As regards the treatment, that will depend greatly upon the variety of the disease present, the stage it is in, as well as the age and general condition of the patient when the physician is called upon to treat it. It is very seldom that the doctor engaged in country practice has an opportunity of seeing it earlier than the latter part of the first stage, and in most instances, not until the second has been reached.

In the beginning of the first stage of *lobar pneumonia*, there is, perhaps, no better remedy for adults than a small dose of morphine and $\frac{1}{200}$ of a grain of sulphate of atropine, administered hypodermically, to relieve the shock-pain and congestion; and the application of a large mustard sinapism over the affected lung. I also administer a full dose of Epsom salts if the patient is of full habit, and has been attacked suddenly. Placing the feet in hot mustard water for at least half an hour will also assist in drawing a considerable portion of the blood into the lower extremities, thus, in some measure, aiding in relieving the lung engorgement. If the temperature has gone up to 102°

or more, four-grain doses of acetanilide, administered to adults every two or three hours, will soon reduce it and put the patient in condition to take ten grains of sulphate of quinine, which may be repeated every two hours till thirty grains are given, beginning after the salts have acted.

If this treatment fails to abort the disease, and rusty sputa begins to be expectorated, we then know that we have got to make a rather long fight for our patient, and should begin at once to husband his physical resources and fortify him in such manner as to enable him to tide the crisis when it comes. We therefore give good nourishment, consisting of sweet milk and meat-broths, together with moderate quantities of rye whiskey and egg-nog; and when the heart begins to exhibit a little feebleness, digitalis should be given according to the indications. In the meantime, we should keep the patient's chest constantly wrapped in a warm poultice or oiled silk jacket, and give him the necessary amount of expectorant mixture, composed of carbonate, or muriate of ammonia, fluid extracts of squills and of senega, with small quantities of codeia. If the temperature is above 102° , we should give three or four grain doses of acetanilide every three hours till the temperature comes down to within the neighborhood of 100°F . By this sort of treatment, we may usually expect to get him over the second stage.

When the third stage, or that of resolution, is reached, and the febrile movements are declining, we give tonic doses of quinine three times daily, and the digitalis and whiskey a little more freely; and if anorexia still persists, we are fond of prescribing dilute hydrochloric acid and pepsin three times daily, to stimulate the appetite and aid digestion. Of course it is important to keep the patient's bowels in proper condition throughout the entire course of the disease, and this can generally be done by the occasional administration of small doses of Epsom salts, or by warm soap-suds enemata.

Uniformity of temperature in the patient's apartment should be carefully looked after and kept about 70°F . both day and night.

If the stage of resolution appears to progress slowly, and is protracted beyond the ordinary time, painting the region of solidified lung with compound tincture of iodine, beside the internal administration of minute doses of calomel, or five-grain doses of iodide of potash three times daily in sweet milk, will often prove of benefit and help to clear up the solidified lung. After resolution has been thoroughly established, and inflammation abated, convalescence can be greatly promoted by a judicious use of cod-liver oil, quinine and iron, together with moderate out-door exercise during good weather, taking especial care to go warmly clad, and not let the exercise amount to fatigue.

ART. XII.—The Treatment of Gall-Stones - with Cases.*

By W. E. B. DAVIS, M. D., of Rome, Ga.

PRESIDENT OF THE TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA, AND TENNESSEE; SECRETARY OF THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION; FELLOW OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS; HONORARY MEMBER OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK; FORMERLY MEMBER OF THE JEFFERSON COUNTY (BIRMINGHAM, ALA.), BOARD OF MEDICAL EXAMINERS, AND SURGEON TO THE BIRMINGHAM HOSPITAL OF UNITED CHARITIES, ETC.

The treatment during the attacks consists in hypodermics of morphine and atropine, with the use of ether or chloroform, until the other remedies have had time to take effect. It is usually soothing to place the patient in a hot bath; and large draughts of hot water will relieve the distressing nausea. After gall-stones have formed, experience does not warrant us in placing confidence in medical treatment for their cure. The sweet oil draughts, as has been abundantly shown, only become saponified, and give rise to stone-like masses. Turpentine, chloroform, and wild yam, are not curative. Perhaps something may yet be found, that, when injected into the gall bladder, will dissolve the stones. This is especially desirable for stones lodged in the

* Abstract of a paper read by title at the Fourth Annual Meeting of the Southern Surgical and Gynæcological Association.

ducts. It would seem that medical treatment would prevent their formation; but, so far, there is no very good evidence to show that any medicine has this effect.

A stone in the gall bladder produces such a condition as to favor the formation of other stones; and after the operation for the removal of the stone, and the relief of the local condition, we have no return of the disease except in a very small per cent. of cases. This is so in those cases in which stones had been forming rapidly before the operation, and would go far to show the importance of the local causes of the disease. Then, in addition to general tonics, iron, phosphate of soda, mineral waters, etc., our dependence must be placed on operative procedures.

In some cases it may be difficult, or even impossible, to make a diagnosis of gall-stones; but it has been said very correctly, that the mistake is much oftener made in calling gall-stones something else, than in calling something else gall-stones. Paroxysms of epigastric pain, with tenderness over the lower hepatic region, accompanied with bile in the urine, and followed by clay-colored stools, and sometimes the passage of stones, are the symptoms upon which dependence must be placed. The shoulder pain is rarely present, and jaundice is most frequently absent. It is only when there is obstruction in the hepatic or common duct that this symptom is to be expected; and often the obstruction is so evanescent as not to give rise to sufficient obstruction to produce jaundice.

When there are frequent attacks of biliary colic, it is best to operate, and give the patient the benefit of the exploration, and avoid the dangers of peritonitis. It is not conservatism to delay the operation, where there are obstructive symptoms, until the liver has become involved and the patient's blood poisoned. The writer has seen a number of these neglected cases in which an operation could afford no chance whatever. He reported a case of death from peritonitis following repeated attacks of biliary colic, where there was sufficient warning to save the patient, but her physician would not advise an operation. In some cases, however

there are no symptoms to indicate the presence of a stone, until peritonitis has resulted from ulceration thus induced. During the past month he had operated on such a case at Ashville, Ala., for Dr. D. E. Cason. The patient was 74 years of age, and had never experienced any symptoms of gall-stones. He recommends cholecystotomy, and opens the bladder and sutures it to the parietes at one operation. He reported a case in which the removal of fifty-one gall-stones from the bladder, one of them being impacted in the cystic duct, and the patient made a perfect recovery.

Cholecystectomy, the removal of the gall bladder, should never be an operation of selection, and only resorted to when cholecystotomy is not possible. Do not stitch the bladder to the parietes and wait for adhesions before opening the viscus, as it is necessary for it to be opened and emptied before the abdominal wound is closed, in order to recognize conditions which will require manipulations within the abdomen as well as within the bladder. Stones impacted in the ducts must be dislodged and pushed in the bladder or duodenum.

It may be necessary to break them up with a needle before this is possible. In some cases the duct should be incised and sutured. When the obstruction in the common duct cannot be relieved, cholecysto-enterostomy should be resorted to.

Modern Medicaments —A novel and attractive feature of the well-arranged list of the extensive line of standard pharmaceutical preparations and modern medicaments, manufactured by Parke, Davis & Co., is the presentation, by forty drawings, of their home laboratories at Detroit, and the branches at New York, Kansas City, and Walkerville, Ontario. These engravings comprise views of the exterior and interior of the laboratories, offices, and sections of the department at Detroit; the cover is engraved. Altogether it is the most complete list ever published of the products of this well-known house—a copy of which will be mailed, on request, to physicians interested.

ART. XIII.—After Treatment of Cataract Extraction.

By W. H. BAKER, M. D., of Lynchburg, Va.

The thing that causes the surgeon the most anxiety, and engages the most attention, is not the mere technique of the operative procedure in the extraction of cataract, such as iridectomy or no iridectomy, sclero-corneal or purely corneal incision, rupture of capsule with point of knife or the capsulotome; but the treatment of the eye after the removal of the cataract.

Dr. T. Wharton Jones, in his book entitled "Ophthalmic Medicine," published in 1847, says: "Both the eyes are to be kept closed; and for this purpose a light compress is to be laid over them when closed, and a light bandage, the middle of which is laid over the nape of the neck, where it may be sewed to the back of the night-cap, and the ends brought round over the eyes, crossed on the forehead, and then pinned to the side of the night-cap." The same author came very near the treatment par excellence, when he says: "Another method of bandaging the eyes is to apply over them a thin strip of court-plaster, extending from the eyebrows to the cheeks, in order to keep them closed, and then hanging over them a fold of soft linen, to which is attached a tape to tie around the head." How unfortunate that he did not stop at the word "*closed*," leaving off his linen and tape-string.

Strange to say, there was no material improvement in the treatment of the eye after cataract operations from this time (1847) until a few years since, when Dr. Charles Michel reported the use of adhesive strips. But he restrained his patients so much that there was very little gained by the excellent dressing; and it therefore remained for Dr. Chisolm to perfect this procedure by the use of white surgeon's-silk isinglass plaster and removal of nearly all restraints after the first day as to light and freedom of action:

Dr. Chisolm, in describing this treatment, says, (after the extraction has been completed):—"I now take a piece of

very thin diaphanous white silk isinglass plaster, one and one-half inch long and one inch wide. Moisten this with the antiseptic solution, and lay it over the closed lids of the eye operated upon. It extends from just under the eyebrow to the cheek, and is wide enough to nearly cover the palbebral split, leaving the great angle beyond the puucta exposed for the escape of the eye secretions, and also for the admission of atropia drops by capillary action, etc."

The eyelid is the natural protection of the eye. It exactly fits the contour of the eyeball, and the combination of the hard tarsal cartilage with the soft tissues gives us a splint bandage unexcelled. The most rational treatment is to use this natural bandage with as little outside covering as possible, and this is fully accomplished in the above described dressing.

Being rather timid as to new methods, and rather loath to give up old friends, my experience consequently with this dressing only covers fifteen cases of cataract extraction.

In these fifteen cases, I did not have the least trouble, either from inflammation, faulty coaption of the lips of the wound, lachrymation, or photophobia, although my cases have represented all classes of people, without hospital advantages, some living in hovels where the utmost squalor prevailed. In the fifteen cases previous to this method of treatment, one was lost by corneal sloughing, and one from irid-choroiditis, and nearly all suffered with more or less lachrymation and photophobia after removing the bandage.

My experience has taught me that the advantages of this mode of treatment are the following: The facility with which it can be applied; its diaphonous nature, allowing the eye to be examined, and drops applied while the eye secretions can escape, without disturbing the eye; the regular and continuous pressure of the lid, preserving the contour of the globe; the freedom from *restraint*, which is hazardous to the health of old people, and the absence of lachrymation, photophobia, and congestion after removing the dressing.

Clinical Reports.

A Case of Posterior Spinal Sclerosis (?).

By J. N. D. CLOUD, M. D., of Newmansville, Fla.

I was called to see Miss A., who, her father said, had been sick for several months with spinal disease, as termed by the gentleman treating her. She was growing worse, and he requested me to examine the little sufferer and give my opinion.

About six months ago, her father noticed that she had a peculiar manner in walking; she seemed to fall forward. The onset was gradual—marked by sharp darting pains in limbs, with impaired sensation in the feet—the patient being unable to distinguish between hard and soft material on which she was walking; there was loss or partial loss of co-ordination. She cannot walk upon a straight line with her eyes shut; in fact, she cannot walk correctly with them open. It was thought at first by her family that all of this was carelessness on her part; but, after watching her for some time, they knew something was wrong. She suffered with excruciating headaches, especially in the morning; her sight became impaired, and the reflexes abolished; tight or binding pains around her body and limbs.

After obtaining the history from her father, I made an examination. Her pulse was 110, with one intermission per minute; respiration 14, and breathing labored; temperature, 101° F. Percussion gave diffused spots of tympanitic sound over her lungs. Auscultation revealed vesicular bronchial respiration. The heart apex was a half an inch or so to the left of normal position, with decided mitral regurgitant murmur. I am inclined to think that the heart trouble was attributable to the extra work imposed upon it by the lung trouble. Urine was considerably diminished in quantity. By Trommer's test there was found about ten per cent. of albumen.

After finishing my examination, I considered that it was almost impossible for the child to pull through, but her parents insisted on my doing something. I prescribed—

R_y—Calomel.....gr. x.

Powd. ipecac.....gr. j.

M.—Make three capsules. S.—One every hour.

I directed that a saline be given four hours after the last capsule. This had a happy effect.

During the next day I prescribed—

R_x—Iodide of potash..... ʒiss.
 Mercuric bichloride.....gr. j.
 Comp. tinct. gentian...ʒ iv.—M.

S.—Teaspoonful three times a day in water after meals.

In a day or so, her kidneys acted more than they had for several weeks, and in one week there was not a trace of albumen in the urine. For the nervousness and headache, I gave her bromides and pulsatilla, and applied a flying blister, each an inch and a half, all along the spine; also applied one behind each ear.

Diet consisted of milk broths, etc.; nothing of a solid character. I also had her legs well massaged twice a day.

She is improving gradually. Her sight has become so that she can see enough to distinguish one member of her family from another.

Foreign Correspondence.

Treatment of Ascites after Hysterectomies, etc.—Apostolli's Methods, etc.—Electro-Treatment of Endometritis—Society of American Physicians—Random Notes, etc.

Mr. Editor,—On the 11th February, 1892, at a meeting of the British Gynæcological Association of London, Dr. Greig Smith in the chair, a very lengthy paper was read by Dr. Heywood Smith on the extra- and intra-peritoneal treatment of ascites after hysterectomies and kindred operations. He favored the intra-peritoneal method, and regarded the extra-peritoneal by pins and serre-nœuds as savoring of barbarity, crudity, and at least very unscientific, reciting the reports of many operators with only a limited number of cases.

Greig Smith, in commenting on the paper, thought that not much reliance should be placed on a small number of cases. Moreover, he thought the first consideration was the saving of life, be it by unscientific crudity, or barbarous methods obtained, and that anatomical precision should ever be a secondary consideration to this.

Dr. Routh thought well of both methods when used by certain indications.

Mr. Lawson Tait, being requested to give an opinion based on his large experience, had no hesitation in regarding the extra-peritoneal treatment as by far the safest method. All his experience with different operations fairly tried, led him from his results to adopt alone the extra-peritoneal methods; and this would be the only course he should pursue until a better and safer method should be discovered. Recently, from the location and smallness of the tumor, he was led to try an intra-peritoneal on a very promising subject; he left in a drainage tube as affording him evidence if hæmorrhage ensued, and not for drainage. It did occur later on, and was so alarming, that he fixed to open the abdominal cavity, when it ceased; this left a troublesome abscess, and patient rallied with great difficulty. Moreover, he added that it was essential in all cases on doing an intra-peritoneal, to get a flap for your stump, and this was often impossible in many cases.

Dr. Geo. G. Bantock showed several specimens of large tumors, with one small one, which were all removed by extra-peritoneal method, and doing well. The small one, he, as was Tait, induced to try the intra peritoneal, only to experience much difficulty and great anxiety. He had nothing new to offer, as he was very partial to the extra-peritoneal, and regarded the cry of crudity, etc., as a poor excuse for adopting a less promising and successful method. Time failed him to reply to the case at length. The extra-peritoneal method is almost entirely done in London.

During my stay in Paris, I constantly visited Apostoli's clinic, where electricity is administered in almost every manner and form. That Apostoli's is exceedingly popular with the laity is evidenced by his large attendance of females at his clinics; moreover, many physicians attend them, and no more genial man one could not wish to meet.

Apostoli's treatment, it must be admitted, is, as it ever has been here, as in America, unpopular with surgeons. Be that as it may, this opposition sinks into a measure of in-

significance, when it is considered that these same surgeons who decry it, have in a great measure had no extensive experience, and are generally ignorant of the present therapeutical effects of so new a subject. These same men have used the argument against him, that he uses electricity as a panacea for all ills, and that, moreover, he is not a good diagnostician. Now, as to the former, I think him fair as to any method offering a cure, but giving electricity the advantage; as to the latter, I do not think a more accurate observer I have ever met. He has a most systematic manner in going through his work. He, as his assistants, are very neat and clever, and the strictest record is kept of every detail, as to diagnosis, condition, treatment, etc. Every case is kept for future reference, which makes it very useful to him in publishing his system of gynæcology, which will soon appear, and doubtless be received with great interest.

Keith, of London, may be mentioned as an exception where a gynæcologist of large experience, thoroughly studied the treatment of electrical treatment of tumors, etc., and wrote: "What I now plead for is, that for a time all bloody operations for the treatment of uterine fibroids should cease, and that Apostoli's treatment, *as practiced by him*, should have a fair trial." Evidently, few are able to treat fibroids as he in a short while.

I am inclined to think uterine electro-treatment is still in its infancy, and that it is not from the treatment of fibroids alone you should expect the most benefit; it is from endometritis Apostoli is getting the best results, and it must be admitted that his treatment of the various kinds and its sequelæ is presenting a remarkable record. Playfair has adopted this plan of treating endometritis with much satisfaction.

The vagina is douched with a warm antiseptic solution before and after each application. The active electrode (be it vaginal or uterine), is rendered thoroughly aseptic by being passed through a flame, and afterwards being submerged in antiseptic solution. The strictest caution is observed in introducing these to cause no abrasions. The potter's clay

electrode, somewhat modified, is placed over the abdomen ; the active pole is in most cases made positive, though, of course, this varies as to the stage and condition of the affairs. The current is slowly turned on until from 50 to 100 milliamperes are reached, when it is continued from five to seven minutes. Seldom does he use in such cases, or in treating ordinary fibroids, an exceedingly large number of milliamperes, nor have I seen such strong currents used as to necessitate an anæsthetic. Quiet is enjoined for half an hour after each application.

Here, in Berlin, we find as in Paris, a Society of American Physicians in a flourishing condition, giving the impression abroad that the Americans are never lagging in anything. Asepsis here, as in London, is fast superceding antiseptis. The red tape system of white coats and pants as practiced by Olshausen ; the towels, etc., as demanded by Martin. The numerous pathological and bacteriological institutes, each having leaders such as Koch, Virchow, Veit, Gebhart, and Ruge, with scores of M. D.'s from every nation to be named, bent on vigilant work, at once impress you that you are in the midst of the greatest germ hunting grounds, and surrounded by the most famous bacteriological warriors.

Gusserow, Martin, Winter, Olshausen, use cat-gut for ligating all internal points required ; white silk is altogether used in London. Martin operates on an ordinary laparotomy very quickly, often doing six in a forenoon ; he, for subinvolution with hæmorrhage and induration, or hypertrophy of os, almost invariably cures the uterus with his (Martin's) curette, amputates a certain portion of os and cervix, and generally relieves the patient.

Olshausen nor Martin neither believe much in pessaries for prolapsus during elytrorrhaphy and perineorrhaphy, with amputations of cervix.

CHAS. G. CANNADAY, M. D.

136 *Friedrich Stross, Berlin, Germany.*

Proceedings of Societies, Boards, etc.

NEW YORK ACADEMY OF MEDICINE—SECTION ON PEDIATRICS.

Stated meeting March 10th, 1892. W. P. Northrup, M. D., Chairman.

A Case of Cyanosis

Was presented by Dr. A. Jacobi, the patient being fifteen months old. A systolic murmur heard over the front of the chest, was conveyed along the abdominal aorta, but was not heard behind. Percussion detected marked cardiac enlargement toward the right, indicating hypertrophy of the ventricle, probably the result of obstruction in the pulmonary circulation. The probable diagnosis was partial stenosis of the pulmonary artery, with open ductus arteriosus. With complete contraction of the artery and open septum, the heart would not be as large.

Two Cases of Imperforate Anus

Were reported by Dr. H. W. Berg, the rectal opening in each case being in the vagina. A long incision was made across the perineum, dissecting out the rectum, bringing it down to the natural position and stitching it in place. Both operations were successful—the patients having normal rectums with sphincters, which they would not have had if an opening had simply been made through the tissues.

A Case of Embolismal Apoplexy in a boy of twelve years was presented by Dr. J. Lewis Smith. The boy had rheumatism, but there was no cardiac murmur. The disease is rare at this age.

Empyema in Childhood.

Is it ever Primary? Its Relations to Pneumonia and to Pleurisy, with Serous Effusion. In a paper with this title, Dr. Henry Koplik said that children may develop an effusion in the chest, not as the result of constitutional causes alone, but causes to which we also trace the development of pneumonia. The diagnosis of pleurisy, as serous or purulent, from simple inspection of the fluid without the microscope, may lead to grave error. Children are prone to sudden effusions in the pleural cavity, and we are struck with the overwhelming frequency with which such effusion is purulent. It often happens that a clear, serous-looking effusion changes to a purulent one; this, however, is apparent rather

than real. It was formerly thought that if fluid at the first exploratory puncture was clear, and subsequently became purulent, some secondary infection had taken place. This we now know to be erroneous. All exudations, apparently serous at first, which subsequently become purulent, do so from causes independent of external interference, but inherent in themselves. Such a serous exudation, examined microscopically, will be found to contain leucocytes, blood cells, and pus-producing micro-organisms. In children, acute exudations, without these micro organisms, is the exception. Such fluid is but one step removed from actual pus. Moreover, the custom of refraining from informing ourselves as to the nature of fluid in the chest by puncture, for fear of contaminating that fluid, is untenable.

In children, is empyema ever primary? *i. e.*, Does it occur without connection with external infection or processes in the lung? Cases in which no other diseased condition was detected upon autopsy, are extreme rarities—so much so, that the writer, in a large experience, has never seen one.

Can the effusion be purulent from the outset? Undoubtedly it may be, and frequently is so. The connection between pleurisy and disease of the lung is thus seen to be very close. The illness often begins with high temperature, and all the symptoms of pneumonia, but after a few days the condition changes, fluid is detected in the pleura, giving the impression that an error in diagnosis has been made. In such cases, microscopical examination shows the same germ in the pus from the pleural cavity as is found in the lung—the pneumococcus of Fränkel. The tendency of this germ to cause suppuration is well known, and it is found in other complications of pneumonia marked by pus, as meningitis. Its presence in empyema renders the close relationship of that disease to pneumonia very certain. They probably invade the pleura through the sub-pleural lymph spaces.

There are other exudations which still cause discussion, in which we do not find the pneumococcus, but other germs of less marked selective tendencies—as the streptococcus and staphylococcus. There is reason to believe that these are also metapneumonic, though the specific germ does not appear.

There are other cases complicating the secondary pneumonia, and occurring without pneumonia in the infectious diseases. These effusions usually show the presence of the streptococcus.

The Diagnosis of Empyema was the subject of a paper by Dr. J. W. Brannan. As symptoms are obscure, the diagnosis must rest chiefly on physical signs. It is easy, when the classical signs are present—immobility of the effected side, loss of vocal fremitus, flatness on percussion, and diminished respiratory sounds. In young children, however, these signs are rarely distinct. There may be no distension of the side whatever, and vocal fremitus, even, if it can be obtained, is of no significance. Signs obtained by auscultation are often difficult to interpret. The normal respiratory sounds are so loud, and the pleural cavity so small, that a considerable collection of fluid may cause but little change. Displacement of the apex beat, is a sign of the greatest value—it is caused by no other condition. The two most constant signs are percussion dullness, and displaced apex beat. Exploratory puncture affords the most positive, and in many cases, the only certain evidence of fluid. As to character of the fluid, symptoms and signs are very uncertain guides. The needle is the only sure test. Pleurisy, following pneumonia, or complicating the infectious diseases and traumatic pleurisy are apt to be purulent. Though the needle often fails to obtain fluid when present, its use when the fluid does not quickly disappear, should never be omitted. It has been alleged by Bacelli, that whispered voice is always present when the effusion is purely serous; but absent when sero-purulent or purulent. This is explained on the ground that sound is more readily transmitted by a homogenous medium like serum. The certainty of this sign is quite doubtful.

Operation for Empyema was considered by Dr. J. H. Ripley in a brief paper. Operations should be performed as soon as a diagnosis has been made. Unless the amount of fluid is very great, or the symptoms are urgent, a delay of a few days will do no harm. The location of the incision must depend largely upon the local conditions. It may usually be made in the seventh inter-costal space below the angle of the scapula. An incision an inch or more in length should be made down to the costal pleura, through which a small opening should be made. Through this, a director should be passed, and the incision enlarged with a blunt-pointed bistoury. A drainage-tube of large size should then be passed several inches into the cavity, with a safety-pin attached to the outer end to prevent its slipping out of sight. If there is not sufficient space for the tube between the ribs, a portion should be removed sub-periostially. The

wound should be dressed with oakum, which should be changed every day.

Expansion of the Lungs in Cases Treated by Incisional Drainage was discussed by Dr. J. West Roosevelt. The idea that fluid in the chest causes compression of the lung has been completely disproved. The lung tends to retract from the chest-wall whenever fluid or air are present in the pleural cavity. It becomes retracted and condensed, but is compressed only when the amount of fluid is very large. Compression can only occur when the elastic recoil of the lung has been destroyed. Expansion of the lung to fill its normal position almost invariably follows early operation performed at the lowest part of the cavity where drainage can be free. The earlier the operation, when pus is known to be present, the better. The prognosis is far better with the chest full of air than with the chest full of pus.

Expansion is aided by the action of the other lung, especially when the glottis is closed, as in coughing. The air is forced by the sound lung into the contracted lung during expiration, and expansion will be seen at that time rather than during inspiration. Granulation tissue, by contracting, also aids in drawing the lung out to the chest-wall.

Removal of sufficient rib to permit drainage is perfectly proper. Removal of rib for the purpose of causing contraction of the chest-wall is almost criminal. It should not contract, and can only do so by interfering with the lung and obliterating space that the lung requires, and, if properly managed, would undoubtedly occupy.

Dr. Scharlau reported a case in which the chest was found full of *pus* on the third day after a sudden onset.

Dr. Caillé had seen a case of *double primary empyema*, as proved by autopsy. The lung was perfectly healthy, and there was no lesion of the tonsils or other organs. Primary empyema is, however, extremely rare in children.

Dr. Holt had never seen a case of primary empyema, nor one in which pure serum without pus-cells had been transformed into pus. Pleurisy accompanying pneumonia is usually distinctly purulent.

Dr. Putnam-Jacobi had seen a case of primary empyema. The theory of lung compression was antiquated and untenable.

Dr. Ewart, of London, believed that while primary pleurisy might occur, it was very rare.

Dr. Ripley said that in a child dullness was not always present, and but little fluid was required to produce bron-

chial breathing. Displacement of the apex was a valuable sign; but it was very difficult, in some cases, to detect the apex beat.

Dr. Andrew H. Smith had often found a line of egophany just above the fluid, and regarded it as a valuable sign. He said that the lung in empyema was contracted—not compressed. He had many years ago proved the transference of impulse from the sound to the affected lung when the glottis was closed.

Dr. Holt referred to the absence of râles and friction sounds, where they had previously been heard, as a very valuable sign of fluid.

Dr. Ewart also referred to silence, where there had before been crepitations, as an important sign. He did not believe that Bacelli's sign was to be relied upon. Symptoms were sometimes of considerable importance. A high or oscillating temperature, associated with a persistent dry cough for a long time, was a suspicious symptom.

Dr. Roosevelt stated that aspiration, with the idea of expanding the lung by the suction, was foolish. At best, it is a waste of time.

Dr. Dawbarn reported a case in which irrigation of the cavity, with a warm one per cent. solution of carbolic acid, had been followed by death from shock in four hours.

Dr. Caillé objected to irrigation on the ground that it breaks up the adhesions, which we wish to avoid.

Dr. Berg advocated exsection of a rib to aid drainage.

Dr. Winters believed that most undiagnosed cases died from exhaustion or tuberculosis, but encysted cases often recovered. He had never seen a case of pure serum changed to pus. Serous effusions were not uncommon in connection with the infectious diseases. He had frequently seen cases of empyema in which a diagnosis of pneumonia had been made at the outset. He had formerly thought that an error in diagnosis had been made, but now believes that that was the usual way in which empyema developed.

Elixir of the Three Chlorides—Renz & Henry's.

Dr. D. Stuart Lyon, of De Land, Fla., says, he has used this in practice "during the past six months; and in all cases to which such a preparation is adapted, it leaves nothing to be therapeutically desired."

**MEDICAL AND SURGICAL SOCIETY OF THE
DISTRICT OF COLUMBIA.**

January 11th, 1892. Etiology and Prevention of Infectious Diseases.

After Dr. Kober's paper (see page 23).

Abstract.—Dr. E. L. Morgan said that bacteriologists assume more than they can prove. He does not believe that germs of any kind can originate *de novo*—no more than can a chicken be born without the hen. The fact of materials being carried thousands of miles by winds (which is overlooked by scientific men) possibly might account for the spontaneous appearance of them.

Dr. W. M. Welch, of Baltimore, says that the bacillus communis coli and of Eberth are not the same.

Dr. Carr emphasized the necessity of knowledge in bacteriology, and mentioned as an example the necessity of knowing which germs are destroyed by drying, and which can be carried in a passive state by wind currents. The biology of pathogenic germs will explain many of the predisposing causes, as that in cholera we find a preceding alkaline dyspepsia, which furnishes a good soil for the passage and development of the cholera germ. Likewise its habitat and methods of diffusion in the body should be known, whether it is local, as in diphtheria, or diffused in the blood. In the future, we may possibly find something that will exert a specific action on disease germs, similar to quinine on the malaria plasmodium. But for the present, we must, in most cases, wait for the germs to die from the antiseptic action of the blood, and the poison they themselves excrete, limiting our interference to relieving symptoms by sustaining the vital powers of the patient, which are taxed to the utmost by the same poisonous excretion of the germs.

Dr. L. Eliot spoke upon the etiology of infectious diseases in general. They are as prevalent and as fatal to-day as before the discovery of the different germs or bacteria, which, it is claimed, cause them. The knowledge of the presence of bacteria in the system of a patient, is no aid to treatment to the general practitioner; bacteriology is a theory—a science on paper—of no practical application. Quarantines were wrong in principle and faulty in execution. He quoted from the report of the Bureau of Medicine and Surgery to the Secretary of Navy (1891), in support of his remarks upon malaria, typhoid fever, cholera, and influenza,

and the water supply of cities. He contended that cleanliness and strict adherence to the laws of hygiene, were the best, the cheapest, and the only defence against the introduction of infectious diseases, either to the system or a country.

Dr. Sohon spoke upon the subject of diphtheria, its causes and prevention. Referred to experiments which had been made with extractives of cultures. To its spread through the agency of cats, dogs, and chickens. Advocated hygienic measures in addition to therapeutics.

Dr. L. Eliot read a paper on the

Conservative Treatment of Pyosalpinx.

Discussion.—Dr. Carr said that in acute cases of salpingitis, it is a safer form of treatment to extirpate the tubes than to catheterize. He had seen cases similar to Eliot's in the Columbia Hospital—seven cases come in with pus collections, averaging from the size of an orange to a quart measure. Had not operated through the abdomen because. Dr. Murphy had objected. In all the cases the abscesses were opened into the vagina. In one case, one and a half quarts of stinking pus were evacuated. None can be called cured, except one colored woman, who returned frequently. In all the cases the adhesions remained and caused trouble. Is there not more danger in trying to pass a catheter or a sound through a diseased tube than to remove it? Had tried to pass a catheter *post-mortem*, but without success. Laparotomy, if done early, is better and safer, for the tubes and ovaries are useless. The present mortality, following operation, is from four to five per cent.; the mortality would be greater if catheterization would come into general use. Where there is a chronic condition of the tubes with adhesions, it is better to remove with the knife.

Dr. Morgan said he had had no experience with cases of pyosalpinx, but had seen them at the clinic of Dr. Johnston.

Dr. Sarah E. Post (recent number of *Medical News*), has treated cases of pyosalpinx and salpingitis with hot douches and the old-fashioned air-tampon; she claims to have been successful in her treatment.

Dr. Carr said that in Dr. Post's cases we have no positive evidence that she drained all tubes; some may have died of ruptured tubes, as the patients were dispensary cases, and such cases, we very well know, are lost sight of, in many instances, before we can determine the result of our treatment. Many cases are supposed to be cured, and are discharged as such, when patients do not think they are cured.

Has never seen a death under operation. Cases of catarrhal salpingitis can be cured by simple treatment with iodine and electricity. Most cases, like Dr. Eliot's, die if left alone. Was called in a case about a week ago, by Dr. Middleton, where the abdomen was filled with pus following an abortion; the operation was unsuccessful, owing to the extremely unfavorable condition of the woman.

Dr. L. Eliot, in closing, said that the only treatment for pus, it makes no difference where located, is the knife. But some patients will not accept that dictum, so some other means must be adopted. Is an advocate for operation in these cases, and the earlier the better. A study of the uterus will soon convince any one that there is nothing physically impossible in catheterization of the tube; of course, gentleness must be exercised, or the walls may rupture. Electricity can have no place in the treatment of pyosalpinx, but in salpingitis of a catarrhal nature, it is useful. If the current should induce contractions in the tube, they must be strong enough to either force the pus into the abdominal cavity through the fimbriated extremities, thereby adding to the gravity of the case, or to open the uterine end of the tube and thus allow the pus to escape into the uterus, and thereby into the vagina, or the weakened tube must rupture, and discharge the pus into the abdominal cavity, necessitating a laparotomy for its removal. Electricity will not dissolve pus.

Dr. J. V. Carraher read a paper reporting a case of *hæmorrhage into the bladder and supra-pubic cystotomy*.

ROANOKE VALLEY [VA.], MEDICAL ASSOCIATION.

Pursuant to a call to the regular physicians of the city of Roanoke, a meeting was held on June 10th, 1891, for the purpose of organizing a permanent Medical Society. The following physicians responded, and constitute the charter membership of the society:

Drs. Jos. A. Gale, Arthur Z. Koiner, Geo. S. Luck, R. W. Fry, J. T. Strickland, H. E. Jones, Chas. G. Cannady, Jno. B. Moorman, Henry W. Harrison, Jas. H. Morgan, S. G. Staples, J. H. Lawrence, and R. Gordon Simmons.

It was unanimously decided to extend the privilege of membership of this society to all physicians in good standing within the limits of the Roanoke Valley, and that it should be known as the *Roanoke Valley Medical Association*.

The objects of this Association are:—to promote the interests of the profession, to bring about fellowship and communion among the physicians, and aid in the promotion of knowledge in whatever relates to medicine and surgery.

The officers of this Association for the ensuing year are Drs. H. E. Jones, *President*; S. G. Staples, *Vice-President*; R. Gordon Simmons, *Secretary*; J. H. Lawrence, *Treasurer*.

It is governed by the usual committees of such organizations, and observes the conventional parliamentary rules.

Requirements of membership consist in application being made in writing, giving school of graduation, date of graduation, place of practice, and endorsed by two active members of the Association. Application is sent to Secretary, and is read to the Association at the next meeting, and then placed subject to report of the Committee on Credentials at the following meeting, when it is voted on by the Association as a whole, taking two-thirds vote to elect or reject.

There have been regular monthly meetings, at which, subjects of interest have been discussed, and instructive papers read.

Each meeting brings new applications for membership, which are cordially received, and the roll now numbers twenty members, representing Salem and the surrounding country.

Taking everything into consideration, our embryonic Association is doing well, and bids fair, if properly supported, to become a permanent, interesting, and instructive organization.

A cordial invitation is extended to all physicians in good standing in Roanoke, Salem, and the surrounding country, to join us, and become active members and workers in the Association. Let us join hands in the matter, and form into a permanent and grand Medical Association of the Southwest.

The Secretary will be glad to receive applications from all who will comply with the requirements as given above.

Ingluvin.

Messrs. W. R. Warner & Co., of Philadelphia, desire to send to any physician a sample of this remedy wherever they have a patient resisting all other treatment for sickness in gestation, marasmus, cholera infantum, for which it has been found to be almost a specific.

Analyses, Selections, etc.

Treatment of Chronic Alcoholics.

Dr. W. R. Amick, of Cincinnati, says (*Lancet-Clinic*, Feb. 6th), that chloride of ammonium will "sober up" an individual who is intoxicated, in a comparatively short space of time. But he intends now to speak of chronic alcoholics—those who have taken alcohol in the system until there has been a structural change produced in the brain and a morbid appetite created.

If a man honestly and earnestly desires to quit drinking and cannot of his own volition do so, the question arises with the physician, "How shall I treat him? There are three courses that may be pursued. The first is, medicine through the stomach; second, by hypodermic medication; and third, by a combination of the two.

1st. A simple yet efficient prescription for allaying the craving for drink in dipsomaniacs is:

R_y.—Tr. capsici.....℥ x.
 Tr. nucis vom.....℥ x.
 Ac. nitric dil.....℥ xx.
 Aquæ..... 3 ij.

M. Sig.—This quantity to be taken three times a day.

Dr. McKinley generally gave the man a pint of good whiskey, and let him help himself to as much as he wanted of it. If there was sluggish action of the liver, or a disposition to dropsy, he gave him a large dose of hydrargyrum protochloride dry on the tongue, to be washed down with whiskey. Then the treatment consisted of a few large doses of ipecac dropped dry on the tongue and washed down with whiskey. Generally two large doses of pulverized ipecac were given, and afterward smaller doses. The diet should be light, and whiskey allowed as long as he wanted it, and in some cases to be given even after it had become nauseous to take. The doctor's conclusions are:

"First, that medicine offers the confirmed inebriate relief from the trammels of appetite, with as much certainty as relief from any other pathological condition.

"Second, that what is done by specialists in the treatment of chronic drunkenness can and should be done equally well by the profession at large.

"Third, that reformation by the aid of medicine has a solid and real foundation in changes of structure on which

appetite depends—which purely moral reformatations lack, and are, therefore, less permanent.”

Dr. D'Agnus discovered a specific for drunkenness which Mr. Medill stated had cured 2,800 cases without a relapse. The formula has been a secret remedy for chronic alcoholism; that it possesses remedial qualities is established beyond a doubt. It consists of red Peruvian bark, the *cinchona rubra* of the dispensary. A pound of the bark is coarsely powdered and macerated in a pint of alcohol until the virtues of the bark are extracted; then evaporate to one-half a pint. A teaspoonful is given every three hours for two days; after that the dose is reduced to a half teaspoonful, then a quarter of a teaspoonful, then fifteen drops, then ten, and finally five. The cure is effected in from one to two weeks, though in extreme cases a longer time will be required. This remedy has the advantage that if it does no good, it will not do harm.

Some are dipsomaniacs because they want to be. Their relations and friends would like to have the habit broken up, and want something that can be administered secretly. For this purpose sometimes—

R.—Powdered capsicum1 part.

 Powdered ginger8 parts.

 Powdered bayberry root bark..16 parts.

M. Sig.—A small quantity to be placed in a cup of coffee.

On account of the color of the coffee it would not be seen.

2nd. By hypodermic medication. Nitrate of strychnia has long been known as an agent that has a powerful influence in controlling the desire and craving for alcohol when given hypodermically. It not only allays the craving, but it has a direct effect upon the brain and nervous system. It may be used by itself or in combination with some other agent that has the peculiar property of antagonizing the influence and change produced by the alcohol; as with the chloride of gold or sodium or both.

The object of the hypodermic method is to make such a powerful impression upon the nervous system that it will break the bonds that have held the victim captive.

That the chlorides have an influence in overcoming the effects of alcohol upon the system, is shown by the short space of time required to sober up a drunken man with the chloride of ammonium when taken into the stomach. This is an indirect way of making an impression upon the system as compared with the hypodermic. The effect pro-

duced is different. When a structural nervous change is to be overcome, the impression made with the hypodermic is more potent.

Peroxide of Hydrogen as a Therapeutic and Diagnostic Agent.

Dr. E. Stuver, of Rawlins, Wyoming, says (*Therap. Gaz.*, March), a *reliable* solution of peroxide of hydrogen is one of our most potent germicidal agents; also an excellent deodorizer. But its most characteristic property is the extreme avidity with which it combines with and decomposes pus. No matter where situated, or how small the quantity, the presence of pus is at once indicated by the effervescing, foaming action produced by its oxidizing power. This peculiar property renders it exceedingly valuable in deodorizing and cleansing foul ulcers, abscesses, or any pathological condition attended by a discharge, and especially so if the pus is tenacious, adherent and difficult to remove. To be effective, however, the solution must be *fresh* and *active*; it should be kept in well-corked bottles and in a cool place; otherwise it rapidly deteriorates and becomes inert.

In *diphtheria*, it yields excellent results; the foul odor is neutralized, the membrane becomes friable, less adherent, and often disappears in a few days, and the general symptoms of toxæmia are mitigated. Its value is increased by the addition of one grain of bichloride of mercury to from four to eight ounces of the solution. This mixture has probably no superior as a local application for diphtheria.

As an injection in *gonorrhœa*, the following combination has yielded good results, viz.:

R \bar{y} —Hydrargyri bichloridigr. j.

Hydrogenis peroxidi sol...f ʒij.

Aquæ, q. s. adf ʒvj.

M. Sig.—Inject, after urinating, two or three times a day.

In diseases of the *nose* and *throat*, it has a cooling, soothing, cleansing, and disinfectant action—preferring a solution of about one-third the ordinary strength, and a mixture composed of one part hydrogen peroxide, and two parts concentrated, distilled extract of witchhazel (Parke, Davis & Co.'s) has acted very nicely.

Peroxide of hydrogen as a *diagnostic agent* to determine the presence of pus in deep-seated abscesses or inflamed glands, in which commencing suppuration was suspected, especially when the abscess or gland is in close proximity to important structures, as in the inguinal and axillary regions

—this agent may be made to render material assistance, and lessen the danger of wounding important vessels and nerves. Inject the peroxide solution by means of a hypodermic syringe, into the suppurating cavity. This immediately produces oxidation of the contained pus, marked distention of the cavity, and stretching and elevation of the superimposed tissues, *thereby lessening the danger of wounding important structures.*

Before injecting the cavity, however, the surgeon should have everything in readiness to evacuate the abscess immediately when the distention occurs; otherwise unnecessary pain will be caused. The cavity should be thoroughly washed out with the peroxide solution until the foaming action ceases, and then dressed with bichloride of mercury gauze.

Treatment of Ganglion.

Dr. Geo. F. Dun says (*Med. Sum.*) that operative measures are the only certain ones. Either rupture the cyst by forcible pressure of the thumbs or with a smart blow with a book, the patient's hand being extended; or thrust a small tenotomy knife or cataract needle into the sac, and move it freely about, in order to thoroughly divide it; or make incisions in the walls of the ganglion, exciting sufficient inflammation to cause the parts to adhere. Then bandage firmly for a time. A cure may occasionally result from the internal and external use of benzoic acid—internally, two to five drops three times a day of a dilution of benzoic acid—externally use:

R—Benzoic acid.....gr. iij.
Glycerine cerate.....5j.

To be well rubbed in morning and evening; or

R—Biniod. merc.gr. ij.
Adipis preparatæ.....5ij.

M.—Sig. Apply morning and evening.—*Weekly Med. Rev.*, Feb. 20.

To Check Milk Secretion in Mastitis.

An ounce of camphor dissolved in three ounces of turpentine has been used in Columbia Hospital for Women to check secretion of milk in mastitis. It relieves pain, diminishes induration, and reduces inflammation. Care should be taken that the part should not be so tightly covered that the application shall produce irritation of the surface.—*Med. & Surg. Rep.*, Feb. 20.

Bromide of Ethyl Preferable Anæsthetic for Short Operations.

In the instructive and interesting report of Dr. Julian J. Chisolm, Surgeon-in-charge of the Presbyterian Eye and Ear Infirmary, of Baltimore, Md., he says: "Although chloroform is the general anæsthetic administered at this Hospital for all tedious, painful operations, the *bromide of ethyl* has been in constant use since 1881, for all painful operations of short duration. A drachm of this liquid in an airtight cone, held over the nose and mouth of the patient, will ensure complete anæsthesia *in less than one minute*; and no one can resist its narcotic influence. It has been administered at the Hospital thousands of times in the past ten years, and always with satisfaction. It is a powerful remedy to be used with caution. With the watchful care that is practiced in its administration, it has been found always efficient and always safe. My assistants have become familiar with the mode of administration. I use a thick towel folded in cone form, with paper between one of the layers of towel to keep the air out and shut in the anæsthetic. When the towel is securely pinned, the hollow of the cone makes a sufficiently commodious air chamber. The base of the cone, a soft towel, can adapt itself as an airtight joint upon the face, and must be so kept firmly in contact with the skin. It is necessary to make the atmosphere breathed a saturated ethylized air, then anæsthesia comes after a few inhalations. If air be admitted freely from without no narcotism takes place

Camphorated Salol in Middle Ear Diseases.

Dr. Pégon has recently reported in the *Revue de thérapeutique* some very favorable experiences with camphorated salol in the treatment of suppurative disease of the middle ear. The formula, devised by M. Desesquelles, is: Equal parts of salol and camphor, mixed and heated until fusion is complete, without water, alcohol, or any other solvent. The mixture is then filtered and preserved in a yellow glass bottle hermetically sealed. Thus prepared, camphorated salol is a thick, colorless, unctuous liquid, soluble in ether, chloroform, or oil, but insoluble in water. Light and air decompose it rapidly. Its application is neither painful nor irritating, and it seems to possess the property of rapidly curing a distressing and very intractable disease. It is applied upon a small pledget or tampon of cotton-wool; to this may be attached a fine thread by which the patient can remove it after twenty-four hours. The ear should pre-

viously be washed out with a weak boric acid solution, and the washing should be repeated once or twice daily when the tampon is not in position. The applications are made once in two or three days, and, if the suppuration is not profuse, the tampons may be left *in situ* from one application to another. The time required for a cure varies from four to twenty days. Dr. Pégon has found the method to succeed where the more popular ones have failed, and says that even where it has not made a perfect cure it has always diminished the fœtor and amount of the purulent discharge.—*Med. & Surg. Rep.*, Feb. 20.

Euphorin in Gynæcological Practice.

L. M. Bossi (*Rif. Med.*, December 15th, 1891), reports some clinical experiments with euphorin in obstetric and gynæcological cases. Employed in powder in twenty cases of ruptured perineum, it promoted rapid healing both in slight cases and in more severe lacerations where sutures had been required. As a dressing to the stump of the umbilical cord in twenty-one newborn babes, in no case did suppuration take place, nor was there any sign of the drug having been absorbed. In none of the cases was there any appearance of icterus neonatorum. In twenty-nine gynæcological cases euphorin was employed as a fine powder, applied by means of a special atomizer (vaginitis, ulcerations of the os, cervicitis, with abrasions of the portio vaginalis, and parenchymatous cervico-metritis) or small pessaries about four centimetres in length, and containing 40 to 50 per cent. of euphorin introduced every two or three days into the uterine cavity (acute and chronic endometritis). In both classes of cases the results were satisfactory. Bossi concludes that his experience leads him to think that euphorin acts both more efficaciously and more rapidly than any other substance hitherto in use, not excepting iodoform.—*Brit. Med. Jour.*—*Lancet-Clinic*, Feb. 6th.

Tamponing the Uterus for Post-Partum Hæmorrhage.

Dr. C. A. von Ramdohr, of New York, says (*Post-Graduate*, March,) that in tamponing the uterus for post-partum hæmorrhage, according to the method brought to the notice of the profession two years ago by Dr. Dührssen, the anterior and posterior lips of the cervix are conveniently seized by two pairs of "American bullet forceps," while, with two fingers in the vagina as a guide, three or four thicknesses of iodoform gauze are introduced into the uterus with a pair

of long dressing forceps, and after this has been sufficiently packed, a similar packing is placed in the vagina. Before introducing this tampon, all clots should be carefully expressed; and if this be done thoroughly, there should be no clots in the uterus when the tampon is removed twenty-four hours later.

Piperazin in Uric Acid Diathesis, etc.

This substance in aqueous solution dissolves twelve times as much uric acid as is dissolved by the same quantity of carbonate of lithium. There is formed a neutral urate of piperazin, which is seven times as soluble as urate of lithium. Piperazin itself and also the hydrochlorate are easily soluble in water. The dose is from 15 to 45 grains a day. It may be prescribed as follows:

R \bar{y} —Piperazin.....gr. xv.
 Aquæ destil..... $\bar{5}$ vj.
 Syrup aurant cort... $\bar{5}$ v.—M.

Sig.—To be taken in the course of the day. To be increased gradually.—*Bost. Med. & Surg. Jour.*, Feb. 11.

Cod-Liver Oil and Creasote in Consumption.

Prof. Julius Summerbrodt, University of Breslau, states: "After nine years employment of creasote in thousands of cases of consumptive patients, I have reached the conclusion that with creasote we can cure sufferers in the initial stages of lung tuberculosis, and not only the initial stages, but also longer seated and severer forms may be completely and permanently cured. Creasote is for countless sufferers an excellent remedy, thus far unequalled by any other for tuberculosis of the lungs. I consider the capsule the most desirable form for administering creasote, adding a readily-absorbable fat, as cod-liver oil or olive oil." Parke, Davis & Co., supply soluble elastic capsules, prepared from the finest French gelatin—cod liver oil, ten minims, creasote one minim—which offer a convenient and agreeable mode of administering these remedies, and will mail to those interested a reprint of Prof. Summerbrodt's report. See their new advertising page.

Book Notices.

Surgical Anatomy. By A. MARMADUKE SHEILD, M. D. (Cantab), F. R. C. S., Senior Assistant Surgeon, Aural Surgeon and Teacher of Operative Surgery, Charing Cross Hospital, New York. D. Appleton & Co. 1891. Cloth. 12mo. Pp. 226. (For sale by West, Johnston & Co., Richmond.)

We purposely avoided giving the full title of *Surgical Anatomy for Students*, for fear that some surgeon-doctor might suppose the book intended chiefly for the college-student. In reality, however, this is an almost invaluable book for the general surgical practitioner. It bears to works on Surgery practically the same relation that *Holden's Landmarks* does to standard text-books on Anatomy. Without specially describing any of the operations in detail, it tells the surgeon how to recognize the various tissues and organs he is cutting through; and also it tells him how to manage the organs, vessels, nerves, etc., exposed by his knife in performing the deeper operations. All who follow it will appreciate the importance of the advice to the practitioner who does surgery. Be sure to get this book, and read it carefully and frequently.

System of Practical Therapeutics. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica, Jefferson Medical College, etc. Assisted by WALTER CHRYSTIE, M. D., Formerly Instructor in Physical Diagnosis in University of Pennsylvania. VOL. II.—With Illustrations. Philadelphia: Lea Brothers & Co. 1892. Large 8vo. Pp. 1158. Cloth, \$5; Leather, \$6; Half Russia, \$7. (Sold exclusively by Subscription.)

This Volume is written by twenty-four authors on therapeutic points connected with "Fevers—Diseases of the Respiratory System, Circulatory System, and Hæmatopoietic System—Diseases of the Digestive System." In short, it is devoted to the *practice* of medicine—so far as the diseases just referred to are concerned. Here and there, perhaps, we find a little too much the bias of personal opinion of the writer as opposed to what is considered satisfactory practice by some provincial physicians; but such rare instances of bias are just sufficient to prove that the author has been a close observer of what others have done or said. The work is *invaluable to the general practitioner* for purposes of frequent consultation; and he should not be without it. We are

struck by the fact that the authors, in their search for the best means of cure, do not hesitate to give prominent mention to many articles not to be found in the Dispensatories—such as Listerine, campho-phenique, etc. We noticed Vol. I in the January and February numbers of this journal—which notices, together with the notice now under eye, we hope will induce every doctor who proposes to keep himself prepared to practice medicine to subscribe for this *System*, so as to provide himself with a standard authority up to date. Vol. III—the one that will complete the *System*—is promised for May.

Physical Diagnosis—A Guide to Methods of Clinical Investigation. By G. A. GIBSON, M. D., D. Sc., F. R. C. P., Ed., Lecturer on Principles and Practice of Medicine in Edinburgh Medical School, etc., and WILLIAM RUSSELL, M. D., F. R. C. P., Ed., Lecturer on Pathology and Morbid Anatomy in Edinburgh Medical School, etc.—With 101 Illustrations. New York: D. Appleton & Co. 1891. Cloth. 12mo. Pp. 376. (For sale by West, Johnston & Co., Richmond.)

This is an excellent book, so far as accuracy and completeness of description of the physical signs of morbid conditions are concerned. Indeed, the reader becomes so interested in the instruction he receives from any page that he is apt to lose sight of the purpose for which he opened the volume—that of finding out the disease to which the well-described and illustrated signs belong. The seventy pages given urinalysis are most valuable. In the chapter devoted to the nervous system, it would have been a great help to the practitioner had there been something of a tabular statement of the localization of cerebral functions, so far as they have been brought to light. The chapters on the circulatory, the respiratory, the alimentary system, etc., are all authoritative and clearly written.

Essentials of Medical Electricity. By D. D. STEWART, M. D., Demonstrator of Diseases of the Nervous System, etc., in Jefferson Medical College, etc., and E. S. LAWRENCE, M. D., Chief of the Electrical Clinic, etc., Jefferson Medical College, etc. With 65 Illustrations. Philadelphia: W. B. Saunders. 1892. Cloth. 12mo. Pp. 158. Price \$1. By mail

This is No. 23 of "Saunders' Question Compends," and is all that is claimed for it in its title. The principles of electricity in its various forms for medical uses are made plain, and much pains are taken in the description of bat-

teries, the exact methods of application, etc. The 65 wood cut illustrations are well-selected for general purposes, and greatly increase the value of the book.

Obstetric Problems. By D. T. SMITH, M. D., Lecturer on Medical Jurisprudence in University of Louisville, etc. With Illustrations. Louisville: John P. Morton & Co. 1892. 12mo. Pp. 60. Muslin, 50 cts, Paper, 25 cts. (For sale by Author, Dr. D. T. Smith, 1016 Seventh street, Louisville, Ky.)

This brochure is "an inquiry into the nature of the forces determining head presentation, internal rotation, and also the development of the amnion." It attempts to solve these problems through the ultimate analysis of the physical principles upon which they are based. Dr. Parvin's classic text-book on *Obstetrics* is referred to as adopting most of the views here presented. The book is one for the thinking part of the profession who seek to understand the cause of sequences. The author attributes the cause of head presentations and rotation to the part that the development of the amnion plays.

Essentials of Physics. *Prepared especially for Students of Medicine.* By FRED. J. BROCKWAY, M. D., Assistant Demonstrator of Anatomy Collège of Physicians and Surgeons, N. Y. etc. With 155 Illustrations. Philadelphia. W. B. Saunders. 1892. Cloth. 12mo. Pp. 330. Price \$1, net. By mail.

This No. 22, of "Saunders' Question Compends," is just such a book as most practitioners should have to give them information on many points of essential importance relating to questions daily arising in medical physics. A copious index helps ready reference. As a student's book to review a course of lectures, it is very valuable.

Wood's Medical and Surgical Monographs. Vol. 12. No. 3. December, 1891. Contents: *Modern Materia Medica with Therapeutic Notes.* By DR. OTTO ROTH. Revised by DR. GREGOR SCHMITT. New York. Wm. Wood & Co. 8vo. Pp. 466. Paper, \$1; \$10 a year.

This—the last of the *monographs* to be issued—like the good-by of an old friend, leaves a good impression, and a wish that it may come again. Arranged for the use of practitioners and students, the various remedial agents are grouped (in Section I), according to their physiological and therapeutic actions; in Section II, drugs, etc., are alphabetically arranged, with remarks on their physiological ac-

tion, therapeutic use and dosage. In Sections III and IV, are named the remedies most commonly given subcutaneously and by inhalations; and Section V, of nearly 150 pages, contains very useful therapeutic notes.

Treatise on Practical Anatomy for Students of Anatomy and Surgery. By HENRY C. BOENNING. M. D., Demonstrator of Anatomy, and Lecturer on Diseases of the Rectum in Medico-Chirurgical College of Philadelphia, etc. Illustrated with 198 Wood Engravings. Philadelphia. F. A. Davis. 1891. 8vo. Pp. 481. Cloth or Oil Cloth, \$2.50, net. From Publisher.

"This book is *not* a compilation; it is the result of years of practical work and a large experience in teaching. The descriptions in the text have been taken from the bone itself and the subject on the table, and are so treated as to adapt themselves to the student everywhere." Our examination of this book gives us a great partiality for it, because anatomy is pleasantly taught. It matters not what textbook the surgeon or anatomical teacher has been in the habit of using, he cannot afford to be without this *original* work. The descriptions are excellent, and the arrangement of the text is well adapted to the wants of the student. We trust the author will avail himself of opportunities to revise subsequent editions, so as to run this work up to the rank of the standard text-book.

Syphilis in Ancient and Prehistoric Times. By F. BURET, M. D., Paris, France. *Translated with Notes by* A. H. OHMANN DUMESNIL, M. D., Professor of Dermatology and Syphilology in St. Louis College of Physicians and Surgeons, etc. Philadelphia: F. A. Davis. 1891. 12mo. Pp. 226. Cloth. Price, \$1.25—net. (From Publisher.)

This book sets at rest all of the wonderings as to how syphilis got from American Indians, etc., to the European people about 1494; for it becomes established by the most cursory examination of history that syphilis and chancroid were common before Christ, and kept on appearing until 1494 in Europe. It is another illustration of the blind following of dictum which traced these diseases back only to the time when America was discovered—no student until now, it seems, having undertaken to look up its ancient literature. This is a most entertaining, instructive, historic work.

Editorial.

Interests of Section of American Medical Association.

The committee appointed last year to consider the best means for promoting the prosperity of the Sections of the American Medical Association, will hold an adjourned meeting in Hotel Cadillac, Detroit, Mich., June 6th, at 3 P. M. Committeemen should notify the Chairman of their intention to be present. The committee wishes each member of the Association to communicate in writing his or her views concerning the best measures for promoting the development of the sections to the Chairman, Dr. John S. Marshall, 9 Jackson street, Chicago.

McArthur's Calendar for 1892

Is about the handsomest small one issued, and is valuable as being a constant reminder of the daily-in-demand for prescriptions of McArthur's Syrup Hypophos. Comp. A copy will be promptly forwarded by the McArthur Hypophosphite Co., Boston, on request, by any physician who has not received one.

The World's Columbian Exposition.

Send fifty cents to Bond & Co., 576 Rookery, Chicago, and you will receive, post-paid, a four-hundred page advance *Guide to the Exposition*, with elegant engravings of the grounds and buildings, portraits of its leading spirits, and a map of the city of Chicago; all of the rules governing the Exposition and exhibitors, and all information which can be given out in advance of its opening; also other engravings and printed information will be sent you as published. It will be a very valuable book and every person should secure a copy.

Medical Society of the State of North Carolina.

The Thirty-Ninth Annual Meeting will be held at Wilmington on the 17th, 18th and 19th of May (a week earlier than at first announced). Subject for Debate, "Puerperal Eclampsia." Leader of Debate, Dr. Frank W. Brown. After April 1st, the address of Dr. J. M. Hays, Secretary, will be 826 Fourteenth St. N. W., Washington, D. C.

The North Carolina Board of Medical Examiners

Will meet in Wilmington, Monday, May 22, and remain in session until all candidates are examined. The examinations are written and oral. A number of applicants, chosen by lot, will be required to make clinical diagnosis of cases presented to them.

The Physician and Surgeon,

Ann Arbor, Mich., has been enlarged; and, while always a good journal, was much improved, beginning with the January issue, 1892. Dr. John William Keating is the editor, to whom the credit belongs.

Medical Association of Georgia.

The Forty-Third Annual Session will meet in Columbus, Ga., on April 20, 21, 22. The officers are: *President*—Dr. G. W. Mulligan, of Washington, Ga.; *Vice-Presidents*—Drs. James M. Hull, of Augusta; Mark H. O'Daniel, of Macon; *Treasurer*—Dr. E. C. Goodrich, of Augusta; *Secretary*—Dr. Dan. H. Howell, of Atlanta.

The Southern Medical College, in Atlanta, Ga.,

Graduated 34 doctors (March 3rd, 1892,) of a class of 100 matriculants. The increase in tuition fee (in common with other colleges of its section) very perceptibly improved the *personnel* of the students in attendance. Progress is satisfactory on the new College Building, which the Faculty hope to occupy next Fall. Under the leadership of Dr. Wm. Perrin Nicolson, the profession of the South may feel assured that the able Faculty of the Southern Medical College will keep as their motto: "Onward and upward."

The Medical Examining Board of Virginia

Will meet in Richmond, Tuesday, April 19th, 1892. See advertising page 67.

Obituary Record.

L. D. McIntosh, M. D., D.D. S.,

Of the McIntosh Battery and Optical Company, died suddenly on Tuesday, March 1st, at De Funiak Springs, Florida, where he had gone to lecture before the Florida Chautauqua on microscopy and kindred subjects.

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Original Communications.

ART. I.—The Effects of Pressure from Large Abdominal Tumors as a Cause of Death after their Removal.*

By J. WESLEY BOVEE, M. D., of Washington, D. C.

PROFESSOR OF GYNÆCOLOGY, MEDICAL DEPARTMENT OF NATIONAL UNIVERSITY; OBSTETRIC SURGEON TO COLUMBIA HOSPITAL; ATTENDING PHYSICIAN TO PROVIDENCE HOSPITAL, ETC.

The danger from shock, peritonitis, hæmorrhage, and exhaustion from various causes is not less in operations on large abdominal tumors, either cystic or solid, than in other operations. In fact, the large tumors are (excepting pus collections), the most strongly adhered to surrounding structures of all the conditions for which laparotomy is done. A large fibroid of the uterus often has to be really dug out of its nest, and it is not unusual to find large ovarian cysts adherent throughout their entire periphery.

Shock may, and often does, cause death in these cases; peritonitis after such operations often proves fatal, and hæmorrhage occurring secondarily, as it often does, may cause the same result. I believe, however, that most cases ending fatally, are so produced by the exhaustion due to the removal of pressure from the large blood vessels of the abdo-

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, March 14th, 1892.

men, from the diaphragm and other parts. Therefore, the result of operations for removal of large abdominal tumors, especially of slow growth, is for this reason always in doubt.

The growth in such cases has been developing gradually, and the blood-vessels have adapted themselves to the consequent lessening of space allotted to them. They are flattened, bent, displaced, and subjected to other inconveniences, so that the obstruction to the circulation becomes very considerable. The veins being less elastic, are first effected, and, as a result, the capillaries are dilated, and the heart and arteries endeavor to compensate by doing extra work. This is probably also compensated for by dilatation of the veins in other parts of the body. These are the effects on the venous system.

The effect on respiration is very important. The diaphragm has been forced upward by the tumor, and has in that manner lessened the space in the thorax, and therefore shortened both expiration and inspiration. From this lessened functional activity, the chest muscles involved become (according to the size and position of the tumor), more or less atrophied. The abdominal muscles are influenced in a manner altogether different, although practically as deeply negatived in their respiratory functions.

In this case, the tumor, after having grown sufficiently to press against the anterior abdominal wall, gradually increasing, carries before it the stretching muscles, which are often stretched to double their normal length. They are held in this position so long, that their elasticity is no longer present. After a large tumor is removed from the abdomen, the anterior wall of the abdomen may be noticed to be devoid of tension in every direction. In inspiration, the intestines and contents of the abdominal cavity, lift up the lax portion, and in expiration, the weight of this portion falls as the intestines recede toward the head. This is more or less wearing on the respiratory effort. A considerable amount of the intestines are so pressed upon, that their functional activity is slight, and hence weakened.

These are the conditions present before the large tumor is removed.

After its removal, what occurs? The abdominal walls are completely relaxed; no strain on the sutures closing the abdominal incision can be demonstrated; the blood-vessels—especially the venous system—become engorged. Their weakened condition will not resist pressure, and they become blood sacs. The blood is pumped into them by the heart, and they, dilating, retain a large amount of it, having no power to prevent this distension.

The result is, this large amount of blood is virtually taken out of the circulation, just as certainly as though allowed to escape from an opening into the blood-vessels. Of course, if the oxygen and carbonic-dioxide carrier is doing less work than it ought, the equilibrium between waste and supply is lost, and the system suffers. • With this is the enfeebled action of the chest muscles and the diaphragm—inherited as their share of the malady. Even if the circulatory system was in a normal condition, the deficiency in function of the respiratory muscles would often be alarming; and when both these are present, the patient gradually, or perhaps, rapidly, fails; the system is poisoned by refuse, and is not fed. The result is necessarily, in such severe cases, death.

I would not be understood as stating, that all cases of pressure from large tumors die, as some of them have retained a healthy condition of these muscles, and they respond when called to do extra work; but these cases are not to be diagnosed satisfactorily before the operation, and are discovered when put to the crucial test—after operation.

The following case came under my care at the Washington Asylum Hospital, and exemplifies the cause of death as narrated above.

Alice W., white, æt. 18 years, was sent to me from North Carolina. Her father and mother were both old, and lived in the mountains of that State, where she resides. She never suffered from any illness, except measles. Menstruation began at 13 years; has been regular, free from pain, and lasts six to eight days. Her last period was over six

months ago. Shortly after this last period she noticed an increase in the size of her abdomen. About two months ago she suffered from an attack of fever, which lasted about five weeks, and which usually reached its acme daily about noon. At this time the feet became œdematous. Last month the tumor was tapped, but no fluid was procured from it. No pain followed this tapping.

Examination.—Patient was much emaciated and poorly nourished. Abdomen immensely distended up to ensiform cartilage, and is unusually prominent below the umbilicus. A circular groove, about two inches in width, extends from the right, anterior, superior, spinous process of the ilium, to the corresponding point on the left side, crossing the median line four inches below the umbilicus. The umbilicus protrudes about one inch, is slightly œdematous, and has a perpendicular diameter of four inches, and transversely measures three inches. On its anterior surface are two elliptical ulcers, one of them being one and one-fourth inch long, and one inch wide, and the other one slightly smaller. In the centre of a line drawn from the umbilicus to the middle of the left Poupart's ligament, are two large, shallow, circular ulcers. Palpation makes it probable that the cyst is multilocular, as the impulse given by palpating the lower sac (that below the shallow circular groove) is not transmitted to the upper one. Contents of the lower sac are more solid than those of the upper one.

Measurements.—From ensiform cartilage to umbilicus $13\frac{1}{2}$ inches; from centre umbilicus to pubes is $11\frac{1}{2}$ inches; from the left anterior superior spine, to centre of umbilicus 13 inches; from the right anterior superior spine, to centre of umbilicus, $11\frac{1}{2}$ inches; circumference at umbilicus, 46 inches; circumference four inches below umbilicus, 43 inches.

Cervix uteri small, virginal, movable, and just behind symphysis pubes; uterus small, retroverted, and freely movable; bowels and appetite satisfactory; pulse feeble; heart sounds normal, but weak; examination of urine shows nothing abnormal. Applied nitrate of silver and benzoated oxide of zinc ointment to abdominal ulcers. The weather being very hot and the patient weak, I deemed it advisable to place the patient upon a tonic treatment, and if possible, wait for cooler weather.

About two weeks later (October 3rd, 1891), the patient having rapidly increased in size, and suffering from pressure, I decided to operate. The temperature had fallen, and I

hoped for cool weather during the time required for recovery, or, *at least*, during the time of greatest danger of collapse, viz.: the first week after the operation. At noon of this date, I operated in the presence of Dr. Eliot, of this Society, Dr. H. H. Barker, and a few other professional gentlemen. The tumor had assumed prodigious dimensions, and I now regret measurements were not taken that day.

Dr. Stoutenburgh, who gave the anæsthetic, gave me the following notes regarding the pulse-rate and respiration. "Operation, October 3rd, 1891, on Alice W——. Ether to stage of excitement, then chloroform substituted. Pulse at first weak, but improved as anæsthesia was completed, becoming small toward the close of the operation. Respiration at first short and rapid; later, increased in length and became less frequent. When cyst was punctured, respiration ceased for a few seconds, but went on again after pressure was made on chest and anæsthetic removed."

An incision of five inches gave ample space for exploration, and the numerous adhesions on either side were separated. A Tait's trocar was used to evacuate the fluid from the principal part of the cyst, and the cyst was drawn out. A wide adhesion to the omentum was ligated and divided, and the stump in left broad ligament was likewise treated, but from its unusual width was ligated by the chain method. About thirty locules were found in this large multilocular, ovarian cyst. Fearing secondary hæmorrhage from adhesions and stump, I inserted a glass drainage tube.

Patient reacted well, and had no nausea during the after treatment. Tubes were removed twenty-four hours later, and, except weak cardiac action, her condition was favorable. The diet was limited, and as nourishing as possible, and digitaline, $\frac{1}{100}$ th grain, was given at regular intervals. The temperature ranged from 99° to 101°, and the pulse from 100 to 124, until the latter part of the third day, when it rapidly became weaker, and troubled breathing also ensued. Digitalines nitroglycerin, and whiskey were given *ad libitum*. The *besoin de respirer* became more pronounced, the pulse increased in frequency, and early in the fourth day death ensued.

In this case the amount of fluid drawn from the large portion of tumor, measured over eight gallons, and the remainder weighed eleven pounds. Estimating the weight of the fluid as eight and one-half pounds per gallon (water weighs eight and one-quarter pounds per gallon) or over

fifty-one pounds, the tumor must have weighed at least sixty-two pounds.

I regret that a post-mortem examination was not made to discover the existing conditions of the parts affected by the pressure of this large tumor.

The complete history of this case, I think, bears me out in the attempt at tracing the death of this class of patients to the causes herein mentioned. I hope the members of the Society will thoroughly discuss this subject, as it is one in which I am much interested.

ART. II.—Wounds and Diseases, Involving both Abdomen and Thorax.*

By J. McFADDEN GASTON, M. D., of Atlanta, Ga.

PRESIDENT SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION; PROFESSOR OF SURGERY IN SOUTHERN MEDICAL COLLEGE, ETC.

The important relations of the viscera lying above and below the diaphragm in their normal state, assume a much greater significance when they become disturbed by wounds, or by pathological conditions.

Certain parts of the vital organism belong exclusively to the thoracic or to the abdominal region, while other structures extend through the partition, so as to occupy both of these divisions. To the latter class belong the aorta, the vena cava, the great sympathetic nerve, the lymphatic system, and their respective ramifications. The alimentary mechanism, is intimately connected with both compartments, while all the elaborating processes are carried on in the lower division. All the movements and sensations of the body depend upon the supply of nerve power by the medulla spinalis, which, included in its bony casing, sends out its lines of communication, as it descends on the posterior portion of the thorax and the abdomen. With these vascular, lymphatic, and nervous communications between the

* Abridgment of paper presented by invitation to Alabama State Medical Association during its session in Montgomery, April 12-15, 1892

organs included in the upper and lower cavities of the body, we are prepared to understand how the troubles of each may be propagated to the other. While the principle of sympathy between the different structures is a recognized pathological condition, it is explained on the same basis of effects, which characterizes reflex disturbances, and must be accounted for through the interlacing of the nerve filaments.

The ordinary sequence of a local disorder, whether traumatic or idiopathic, is not generally distributed to all the surrounding structures, but in certain directions and by fixed channels, to a definite class of tissues under the influence of pathological laws.

The revolution is notable through which thoracic and abdominal surgery has passed in the last quarter of a century. The favorable results of thoracotomy and laparotomy, demonstrate a recuperative power on the part of the pleura and peritoneum, which is well illustrated by a case of extensive wound, reported by Brokaw, of St. Louis.

A typical case of thoraco-abdominal wound occurred under my observation in the early part of 1891, in the person of a young negro man. While engaged in a fight, he was stabbed in the left side, the blade of the knife entering above the tenth rib, on a line descending perpendicularly from the nipple. It passed inward and downward through the pleural cavity, penetrating the diaphragm, and invaded the abdominal cavity. When I was called to him at the Providence Infirmary some hours after the injury was received, it was ascertained that he had vomited repeatedly from the effects of beer which he had been drinking. He lay in a semi-conscious state when left alone, but became agitated and violent when disturbed, and was therefore given a hypodermic of morphia, gr. $\frac{1}{4}$; atropia, gr. $\frac{1}{150}$, to secure composure for the surgical procedure.

Upon examination, I found a hernial protrusion of the omentum, about the size of a hen's egg, outside of the cutaneous opening. Pressing steadily with my fingers around and above this mass, it was gradually carried back through the external wound.

The most rational explanation of this double hernia escaping from the abdomen into the thorax, and thence ex-

ternally, is that the openings made by the knife through the wall of the thorax and the diaphragm, were brought together by the impulse of the contents of the abdomen against the diaphragm carrying it upwards and outwards. With the incisions in contact, it was an easy matter for the omentum to pass out through both, just as a stud is passed through two button-holes of a shirt sleeve when approximated. The bulging out and enlargement of the part beyond the skin, served to keep the protrusion fixed in situ, just as the head of a stud holds it in position with the button-holes.

That so large a segment of the omentum should have been strangulated and exposed for such a length of time without inducing peritonitis, or other serious results, is only an additional proof that the peritoneum can undergo more rough treatment than was formerly supposed without being followed by inflammation.

The most important class of injuries to the abdominal and thoracic viscera, are those inflicted by firearms. The medico-legal aspect of gunshot wounds arrests attention especially, and the difficulty of determining upon the course of a ball in either of these cavities, when there is only a point of entrance brought under the observation of the surgeon, is generally recognized.

The practical bearing of a case, which was examined in conjunction with several colleagues, warrants a report of the facts presented at the outset and subsequently.

The patient received a pistol shot in the epigastric region, and no clue was obtained as to the course of the ball until two days afterwards, when soreness directed attention to the right side of the chest. Upon palpation the ball was found lodged between the seventh and eighth ribs, and hence must have passed diagonally inward and upward. It must have traversed the liver and the lower part of the pleural cavity, with perhaps injury of the lung. There was a marked tendency to collapse about twenty-four hours after the injury was received, which was attributed to hæmorrhage into the right pleura. He rallied under the use of stimulants hypodermically applied, but died at the close of three days, and no post-mortem examination was made.

An instructive case of gunshot wound penetrating the upper portion of the chest on the right side, and passing downward diagonally across to the left side of the abdomen, came under my observation a few years ago in this city. I saw this patient in consultation about a month after the injury was received, and then diagnosed empyema of the right pleural cavity, with the recommendation of an operation. But, on the following day, another colleague, with a good surgical standing in the profession, joined in the consultation, and gave an opinion in favor of waiting for further developments. My conviction was unchanged in regard to the urgency for evacuating the collection, but the attendant acquiesced in adopting the course of masterly inactivity in the case, and the patient succumbed in less than a week afterwards.

Being invited to participate in the post-mortem examination, it was verified that the right pleural cavity was filled with pus to such an extent as to push the mediastinum beyond the median line, and to cause a depression of the diaphragm. The ball had traversed the liver, and was found encysted in the omentum, with but slight indications of inflammation in the peritoneum or other abdominal viscera.

A counterpart of this last case has come under my observation recently in a gunshot wound entering the left side of the chest and ranging diagonally backward into the abdomen :

This was a white man, A. C., 33 years old, who was shot with a Smith & Wesson pistol of 38-calibre by a man at his left side. I saw him about fifteen minutes after the shooting, and found that the ball had passed through a thick coat, vest, shirt, and undershirt, penetrating the chest wall between the sixth and seventh ribs on a line with the anterior axillary fold, and about an inch below a transverse line from the left nipple. It was out of my power to determine precisely what course the ball had taken, and upon a careful examination of the opposite side of the thorax by palpation, the presence of the ball could not be detected.

The patient labored under the influence of shock to a limited extent, with a weak and frequent pulse; but there was no hemoptysis or dullness upon percussion over the left

side, and the respiratory murmur was very evident upon auscultation over the front of the left lung. It was hence inferred that the ball had not penetrated the lung. About twenty minutes after the accident, a hypodermic injection of morphia, grs. $\frac{1}{4}$; atropia, gr. $\frac{1}{150}$, was used and repeated in half an hour.

Upon learning, two hours afterwards, that he had vomited blood, a combination of ergot, digitalis, and elixir of opium, was given. Realizing that the stomach was perforated, I suggested next morning a laparotomy, but my colleague thought it best to leave the case to nature, and the patient was left in his charge.

As this kind of surgical conservatism was not calculated to avail for the relief of perforation of the stomach, it was not a matter of surprise that the case terminated fatally at the end of the third day from the receipt of the injury.

An autopsy made by the county physician, Dr. E. Griffin, under the direction of the coroner, revealed that the ball had passed through the thoracic wall, traversing the lower portion of the left pleural cavity just beneath the pericardium, thence perforating the diaphragm and the walls of the stomach with those of the transverse colon. The conical ball was found lodged in the muscular tissues on the left side of the vertebral column nearly opposite the seventh dorsal vertebra. There was but little blood in the pleura, but much in the peritoneum.

When the anatomy of all the parts involved is recognized, it will be understood that the ball passed nearly at a right angle with the axis of the body, and came from a pistol held on a line with the external wound by a person occupying a position obliquely on the left of the victim, as described by an eye-witness.

The matter of practical moment in this case is the probable outcome of a laparotomy after the wound of the stomach was recognized by the vomiting of blood. In view of the fact revealed by the autopsy, that the colon and stomach were perforated, and that no other serious wounds existed, it appears that closing the openings might have averted death.

An interesting case, in which an injury over the sternum extended to the abdomen, has been treated in consultation, in the person of a vigorous white man, with a fatal result:

A contused wound, without laceration of the skin or fracture of the bone, caused considerable pain in the chest at the outset, followed by febrile disturbance, and was ultimately complicated with cramp of the bowels and distension of the abdomen. There was marked thirst, and vomiting from taking large quantities of fluids into the stomach. The intestinal torpor only yielded to frequent doses of calomel, followed by castor oil and spirits of turpentine.

While there were indications of traumatic pneumonia, as a direct result of the injury, the transmission of the inflammatory process to the abdominal viscera induced peritonitis of a grave character. So far as could be learned from the history of the contusion, there was no violence immediately to the walls of the abdomen, and hence it was inferred that by a metastatic process inflammation was propagated to the peritoneum.

Notwithstanding the employment of vigorous measures to combat the thoraco-abdominal complication, it ended fatally in the course of a week.

In illustration of the effects of pathological conditions, implicating the abdomen and thorax, I recall an interesting case connected with gall-stones, which was under my care some years ago :

After long-continued hepatic derangement, with the evacuation of gall-stones by the bowels from time to time, there eventually developed a pulmonary disorder with a very peculiar expectoration. It did not present the characteristic appearance of mucus or pus, but had a grumous and sanious character, with a most offensive odor, such as never has been encountered in any other case. This very remarkable stench permeated the apartments, so as to make it extremely unpleasant to remain in any part of the house, and there was a constant renewal of it from frequent expectoration of the dark brown matter by coughing. The patient had been for several weeks in a very feeble condition, and only survived this pulmonary complication a few days.

An autopsy revealed several very interesting pathological complications.

An ulcerated communication between the abdomen and the thorax was the feature of the case bearing most directly upon the subject of this paper, and under peculiar conditions.

The difficulties attending a correct understanding of the complications, growing out of thoraco-abdominal wounds and diseases, are such as to demand full investigation of this class of cases by the profession.

The anatomical relations of the thoracic and abdominal viscera, separated by the concavo-convex muscular partition of the diaphragm, renders a diagnosis of complex injuries highly important.

I have ventured upon this comparatively unexplored field of observation with the hope of arousing an interest in this branch of surgery; and I trust that the points presented may elicit profitable discussion from those who may have experience in treating these complications.

**ART. III.—A Case of Cerebral Hæmorrhage Predisposed by
Kidney Trouble—Remarks.***

By GEORGE BYRD HARRISON, A. M., M. D., of Washington, D. C.

The case to which you are referred is very benign and uncomplicated in character, but typical of a certain class; and yet it seems to me, for this very reason, to present an assemblage of symptoms, useful, as finger-marks, in the study of the etiology, diagnosis (including localization), and prognosis of such diseases.

In our discussions, heretofore, we have embraced many general diseases—gynæcological, surgical, dermatological—and others too numerous to mention. But, if I am correct, cerebral pathology has not once been mentioned.

On January 17th ult., in the afternoon, I was called to one of our principal hotels to see a member of the bar (well known and highly esteemed in this community), who had been taken ill, very suddenly, in his bath. He had previously felt particularly well, as he assured me. I was pained to observe a certain degree of thickness of utterance, with slight drawing of mouth-corner upward on the right side.

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, held March 14, 1892.

There was no deviation of pupils, nor of tongue; "bilious tongue."

His wife was at once informed as to what had occurred, that he might be protected, as far as possible, from further mischief.

Next day, at 12 M., his tongue deviated to the left side; his mouth, however, was still drawn to the right. There was distinct loss of power in the left upper extremity; slight discomfort as to head; tongue improving; pulse not unduly tense.

The head-pain (referred to right side), became sufficient to induce leeching (with relief).

From that time he has progressed towards recovery, manifesting no especially new symptoms, except slowness and high tension of pulse; equal contraction of pupils; with much præcordial oppression, at times, giving him apprehension lest his heart were involved. He is now at a near-by health-resort.

A few days after his seizure, lest I might leave some stone unturned in the effort to promote absorption, Dr. S. C. Bussey was called into the case, and continued with me until the patient's departure from the city.

I have made no allusion to such symptoms as restlessness, nervous depression, and occasional tearfulness, because of their routine occurrence in such instances.

It should be stated that, at this writing, but little of the helplessness of the upper extremity (left) remains, except as to the fingers. There is some difficulty in prehension, and in co-ordination of digital movements generally.

As to the previous history of this gentleman, he has usually been a man of free, social habits, but never intemperate. In the past few months, his devoted wife assures me he has been very abstemious. Some three years ago, I diagnosed cirrhotic kidney, informed him of his danger, and (supported by his wife) eventually enjoined appropriate measures of treatment; but he would have none of it, and has frequently twitted me with his lack of cause for regret that he had disregarded my admonitions. Once he did this in friendly badinage while cross-questioning me on the witness' stand.

I offer you notes of an analysis made by Dr. G. Y. Acker

since his recent attack in confirmation of my diagnosis of serious renal disease.

We have here a beautiful example of kidney trouble furnishing the *predisposition*, with careless use of the bath superadded, as an *exciting cause* of rupture of miliary aneurism; for there is little doubt that the hæmorrhage occurred in this way.

But, in such a case, it is important, if we can, to locate the ruptured aneurism. The facial paralysis is crossed—*i. e.*, is on the same side with that of the arm; therefore we must look above the tuber annulare for the clot. There is no decussation of the fibres of the facial lower down. Though the pupils are symmetrically contracted, we should be led away from the pons by the mildness of the attending symptoms without taking decussation into the account.

The corpus striatum is regarded by many authorities as the most fréquent seat of hæmorrhage; but it would seem that Prof. Charcot has demonstrated, successfully, that such is not strictly the case, but that the internal (or external) capsule is more commonly the primitive seat—and that in cases, like this before us, in which hæmiplegia occurs, *without hæmianæsthesia*, we may expect to find it in the anterior two-thirds of the internal capsule.

He has pointed out that the second branch of the middle cerebral (Sylvian) artery supplies the anterior central convolution, the upper portion of which is the motor centre for the upper extremity.

I venture the opinion that the clot we are considering would be found in the area of distribution of one of the subdivisions of this second branch, and beneath the cortex.

Perhaps further light may be thrown upon this conjecture in the future history of the case.

It would appear that the area of lesion might also involve a portion of the posterior central convolution[†] (judging from finger symptoms) in the vicinity of the upper part of the anterior one. The pressure and inroads of the clot could account for this, however, without necessity for supposing the *third* branch of the Sylvian artery to be implicated.

As to prognosis, this must necessarily be grave. The predisposing renal conditions, as well as those resulting from them—viz: High tension, probable aneurismal dilatations, etc., still exist; indeed, are possibly progressive; while the age of the patient (68 years) gives little reason to hope for improvement. Another rupture is likely in the near future.

As regards the present brain lesion, it being in the right hemisphere, and the patient right-handed, more or less complete recovery from it may be confidently predicted.

605 *Fourteenth Street N. W.*

ART. IV.—Maternal Impressions.*

By GEORGE R. WEST, M. D., of Chattanooga, Tenn.

It has been stated for ages that maternal impressions affect the fœtus in utero; and, for an equal length of time, malcontents have attempted to prove that such an idea was a superstition, to be believed only by midwives and the credulous; but that a thinking, scientific man, could find no foundation for such a belief.

The chief reason used by the affirmative side has been the reference to authenticated published statements of cases. They brought forward numerous examples, and with no more plausible explanation, they were forced upon us as instances of how a sudden fright to the mother would produce sad results upon the fœtus. Almost every journal has some incident told in its pages to substantiate the theory. I select several at random, and relate them in order that you may be convinced of the truth of the popular notion.

A woman of good honest character gave birth to a child minus two fingers of the right hand. She said she expected it, as when she was three months' pregnant, a neighbor living next door came in, whose hand had lost two fingers, which fact she had never noticed before. The intra-uterine amputation of the child's hand corresponded with that of the neighbor.

* Read before the Chattanooga Medical Society, March, 1892.

A pregnant woman was chased by a pet coon, which sprang upon her right shoulder. She was much terrified. When the child was born, over the right shoulder and along the neck, it was covered with a hairy growth, as much resembling that of a coon as two peas resemble one another.—(*Dr. Drewry, Keytesville, Mo.*)

The clothing of a pregnant woman by some means took fire, and she was horribly burned about the pubes and abdomen. In two or three days she was delivered of a still-born child, on whose body were blisters as if produced by fire, corresponding to the parts burned upon the body of the mother.—*Dr. T. A. Martin, Dalton, Mo.*

A woman was severely burned about the legs. The shock was so great that she miscarried in six hours. The corresponding parts of the foetus were blistered, and had the same appearance as those of the mother.

A lady, while in the seventh week of pregnancy, had an only brother who was arrested for a heinous crime. Her grief and anxiety were very intense, and she was continually asking questions in regard to prison life. Upon one occasion while visiting the jail, a prisoner was brought in shackled, and she repeatedly spoke of the sight, and hoped her brother would not be treated in that manner. It made a profound impression upon her; it was on her mind for days, and upon two or three occasions she dreamed she saw her brother in irons. When about five months advanced, she fell down stairs, producing a miscarriage, and the child bore this deformity: A hare-lip; extending from the junction of the metacarpal and first phalangeal bones of the left hand was a fibrous cord, passing over and attaching itself to the tip of the index finger of the left hand, there spreading out and enveloping the fingers as would a mitten. About an inch from the tip of the fingers, on the radial side of the right arm, was attached a fibrous cord, with a loose floating end. Springing from the second toe of the left foot was a fibrous cord, passing over and wrapping two or three times around the ankle of the right leg, almost amputating it. It requires very little imagination to see the resemblance between these cords and the "shackles" referred to. The negative side then say we confuse physical laws with our mental impressions and draw upon our imagination for resemblances.

Let, us in attempting to study this question, first glance at the anatomy of the parts involved. During the passage of the egg along the Fallopian tube, the shaggy chorion is

formed. Its first changes consist in its extension into a number of minute prolongations called villi, through which are absorbed the fluids (from the parent) necessary for its growth. When it reaches the womb, that peculiar membrane known as the decidua, and which is cast out monthly unless impregnation occurs, receives it.

Impregnation occurring, the decidua by reflection envelops the ovule, and an intimate connection is established by the villi between the chorion and the decidua—the villi dipping into the lower mouths of tubules, which are found in the decidua. An important secretion is poured forth by the uterus from these follicles, from which the villi of the chorion derive sustenance for the ovum. As yet, no blood vessels exist in either chorion or decidua. With the continuation of the vital processes, the foetal blood vessels ramify through the villi of the chorion, which in some of the mammalia entirely surrounds the ovum, and in which it lies imbedded like the nucleus of a cell.

But in man, with the appearance of vascularity, a portion of the chorion withers away, and there is an agglomeration of nutritive vessels at some one part of the foetal eclipse. At the same time that the foetal circulation is being established, the maternal vessels ramifying around the tubules of the decidua become enlarged, and surround the foetal vessels, which we have shown develop in the permanent portion of the chorion. In this way is formed the placenta, through which the embryo is nourished after the second month. This nourishment is a process of osmosis, the placenta being both a secreting and excreting membrane. On one hand, it receives from the parental blood those elements which are to build up the future being; on the other, it parts with those excrementitious and gaseous elements which are incompatible with the nourishment and existence of the foetus. It will be seen that at no time is there any direct vascular connection between mother and child. The systems are distinct. The vessels of each meet and touch, and perform their functions, and separate.

What is true of the blood-vessels is equally true of the

nervous system, for as yet nerves have not been shown to exist in the placenta, although from analogy we believe they will yet be discovered. But the sympathetic system becomes wonderfully developed in the uterus during pregnancy, and the influence which it is capable of exerting upon the uterine growth, as long as no nerve connection is shown, must be conceived to exist separate and apart from any direct connection between the mother and the embryo.

In the following facts we have reasons for believing the influence of maternal impressions :

1. Every idea, every impression, must be materialized, or, in other words, it is impossible without the work of nervous tissue.

2. There exist many phenomena which cannot be explained by direct connection with the nerves, as, for instance, the action of one mind upon another at a distance.

3. A certain impression or idea can influence the function of our tissues or organs; as, for instance, fear can produce many disorders in our organism. Even the thought of a lemon can produce abundant secretion of saliva, etc.

Besides, the modern psychologists and physiologists believe that the fœtus, long before entering the world, is conscious of pain and physical satisfaction, and also gives expression to many impressions. These affirmations of psychologists are founded upon experiments, which prove that the placing of the cold hands upon the walls of the abdomen immediately produces movements of the fœtus, and it is well known that the body is not a good conductor of warmth. It is also known that the light suddenly thrown into the eye of the mother, as well as a sudden noise, produces violent convulsive movements of the fœtus; and Perez states as a fact, that a certain woman experiencing great fear three months before the birth of her child, felt convulsive movements of the fœtus, and the child lived only a few months after birth, having very often, and without any external cause, sudden convulsive fits.

The subject of inheritance is closely associated with this theory of maternal impressions—it being claimed by some

that those traits of character, as well as the physical formation of the offspring so commonly ascribed to inheritance, are, in most cases, the results of moral impressions derived from the surroundings of the mother. If we believe in the accepted idea of heredity, we must then believe that maternal impressions are possible; for the unimpregnated ovum and the spermatozoa are just as devoid of nervous connection with their source, at the moment of conception, as the foetus and mother ever are.

There is an influence by mental impressions upon adult organs, hinted at above, which, when considered in this light, gives some color to the theory. The example of the increased flow of saliva caused by a savory odor is common. The shedding of tears while listening to pleasant music, or witnessing fine acting, is well known. We all know that fear sometimes relaxes the sphincters. Fear will often bring about a copious perspiration, and there are authenticated cases of hair turning white in a few hours through fright.

Not only do mental influences impress the various organs, but there is an influence exerted upon their fluids after being secreted and lying *in situ*. Take, for example, the secretion of the mammary gland. Instances are numerous of the changes in the mother's milk, caused by anger, grief, fear, terror, etc., and of the sometimes fatal result to the nursing child.

While there is no nerve connection of the embryo with the mother, it must be nourished from the mother, and it is through this nourishment that it is claimed the influence must take place.

The oft-quoted piece of Bible history concerning the contract between Jacob and Laban in regard to the striped kine shows how long the theory of maternal impressions has been prevalent. All breeders of stock at the present day believe the doctrine, and, in order to make good colors and showy animals, confront the female, while being bred, with perfect specimens.

We have all, I dare say, seen the strange things accom-

plished through the wonderful power of mesmerism. We have seen one individual convince another, while under the mesmeric influence, that they were drowning, flying, swimming, etc. This influence and control of one mind over another is strange; but is it more so to suppose the mother's mental conceptions can manifest their power upon the embryo? Like two cords strung in unison, if we strike one the other vibrates.

One author suggests the following comparison, as showing the method by which these impressions occur: If we take the helix of an electrical battery, and surround it with one of larger size, and pass a current of electricity through the larger helix, although there is no direct electrical communication between the two, a corresponding current, weaker in its manifestations, will be found in the enclosed helix.

Now, the mother is the larger helix; the foetus is the smaller. The nerves of the mother and of the child are in close proximity. A mental impression upon the brain of the mother passes, with the speed of a nervous force, to the uterine system of nerves; its influence is received by the foetal nervous system, and manifested upon the foetal body.

And thus it is from the side of belief. Now, let us look at the phenomena from the standpoint of disbelief.

All malformations can be accounted for by the laws of growth, and are at work from the formation of the ovum. These may be classified as follows: (1st.) Defective germs; (2nd.) Defective fission in the development of the vitreline membrane, or its primitive traces—*i. e.*, there may be two neutral axes instead of one, or the one may be incomplete; (3rd.) Arrest of development; (4th.) Excessive development. However, those who advocate the theory insist that, as the ovum comes from the mother, even if the cause of a deformity is traceable to a defective ovum, the mother is the first source.

The arguments generally urged against the theory of resemblance, as we may now call it, are of considerable force,

though, indeed, of such a nature as to leave us dissatisfied, because they are negative rather than positive, and do not attempt to explain the facts by any other theory.

It has been observed that—

1. Malformations of the most peculiar nature are found in the lower order of animals, such as echinoderms and crustacea, where no mental impression could have existed.

2. Malformations in the human species do not correspond to the mental impressions of the mother.

3. Most deformities occur at those early periods of pregnancy when the woman is not sensible of or certain of the fact.

4. The same unnatural formation may be observed in several children of the same parent.

5. All abnormalities are rather subject to the laws of physiological development than to the effects of fright.

6. What we call the lowest order of monsters, the acephalous, have been born with a well-formed child, where the mental impression, if any existed, would have acted upon both.

7. The fœtus, when a germ, is completely separated, as to its vascular and nervous connections, from the mother. This is still more clearly shown in the ovipara, where malformations and peculiar markings are quite prominent in birds and reptiles.

8. Fright and other mental impressions of an alarming nature disturb almost every woman during gestation, so much so that the fear the child will be marked is the common bug-bear of the sick room. The fear of deformity from mental impressions, which have actually occurred, is the rule instead of the exception, while the actual deformity is the exception instead of the rule.

From the foregoing, I think it becomes evident that maternal impressions can and do affect the fœtus. If we decide that the mother can affect the embryo, in respect to its perfection of form and mind, according as are her surroundings, we then take upon ourselves additional responsibilities.

Preventive medicine would include a more careful watch over the prospective mother if her surrounding circumstances make or mar the child. If maternal impressions are a fact, then ought we not to protect our pregnant females by keeping off the streets the hideously deformed individuals who may cause abortion, or so mar their offspring as to make them a constant misery instead of a joy forever, as they were intended?

If it is true that the surroundings of the mother affect the fœtus, then are we professional men not responsible if each child of the future does not reach intellectual and physical perfection?

ART. V.—Remarks on Typhlitis, as Suggested by a Case in a Child of Nine Years, Probably Caused by Seeds of Fruit Eaten a Month Previously

By S. J. RADCLIFFE, M. D., of Washington, D. C.

I was called, November 14th, to see a child nine years of age, a resident of the Island of St. Thomas, W. T., temporarily on a visit to relatives in this city. She had a good family history, was well-nourished, and had enjoyed fair health previously to leaving home a month before. I found her lying on her back, with her right leg flexed over a pillow and crying with pain. She had a slight chill the evening before, followed by fever, pain, and nausea, and had a restless night.

Her face was flushed, skin hot, pulse 130, temperature 102.5°, mouth dry, tongue coated, and much thirst. Her bowels were constipated and urine high colored, and in decreased quantity.

On examining the abdomen, I found she could not bear the pressure of my hand, except in the gentlest manner. There was great tenderness over the ileo-cæcal region, and a considerable circumscribed hardness could be felt by pressing a little deeply. The tenderness radiated from this point over half the abdomen, and the pain was increased with every motion of the body. I could not extend the limb without increased pain, but could flex the thigh up to the

abdomen without additional discomfort, and this was the only position in which I could make a satisfactory examination. There was no urinary complication, no icterus or evidence of hepatic trouble, nor any stercoraceous breathing from fæcal absorption.

Her abdomen was ordered to be rubbed with camphorated oil, and had flaxseed meal poultices applied continuously over the seat of pain, and teaspoonful doses of castor oil with ten drops of tincture of hyoscyamus in aromatic emulsion, was prescribed to be given every two hours, alternately with two-drachm doses of spirits of mindererus. In the evening, she was about the same. She complained of pain, was uneasy, had dosed a little, but had no disposition to sleep.

15th. Had a restless night, and condition not improved. Pulse and temperature about the same; thirst and anorexia continue, with pain on the least motion. Applications to the abdomen with poultices continued; also the oil emulsion, three grains of salicylate of sodium being substituted for the spirits of mindererus. Evening.—Little easier, less fever, and less pain; abdomen a little softer, can bear pressure better; no motion from bowels; other symptoms the same.

16th. Slept better last night, looks better, less pain, slight perspiration on forehead. Pulse 110, temperature 100.5°, bears examination better and abdomen softer. Had slight motion from bowels of a few fæcal lumps and some borborymus; directed discharges should be watched in order to ascertain any offending cause. Evening condition better; skin moist, pulse 100, temperature 99.5°, tongue moister and less thirst. Had a free odorous passage from the bowels, and in it was found seeds of a particular fruit peculiar to the West Indies, which she had eaten at home, and recognized by her mother, with some scybalæ and mucous masses. The seeds were matted together in irregular balls or knots, mixed in with fæcal matter and mucus, and hard to separate.

17th. Condition altogether improved. No lump felt in the iliac fossa; some soreness over the abdomen, but no peritoneal tenderness as before. Can extend her limb and move better.

Treatment continued only so far as it was necessary—the application of camphorated oil, the emulsion only sufficient to keep the bowels open, and cotton batting over the abdomen to replace the poultices. Liquid diet, which had been

given from the beginning, was ordered continued until complete convalescence.

From this time general improvement went on satisfactorily, and by the eighth day, the 21st, she was able to sit up and change her bed for the chair or lounge—her bowels having moved daily, relieving them of all faecal or other obstruction, until now the passages had become normal in consistency and color, and free from unusual odor. On the tenth day she was discharged, apparently well. I learned, however, that some two months after, she had a similar, milder, recurrent attack, after her return home.

The literature of typhlitis in children is not extensive. Very few of the text-books on children's diseases mention it, and there are not many cases reported in the journals. As it occurs in adults, or from the age of sixteen to sixty, the literature is much more abundant. It does not occur very often in children, but it is surprising it does not occur more frequently, from the known tendency of all young children to swallow the seeds with the fruit they eat, especially the seeds of grapes, cherry stones, and often of dates, together with other indigestible substances. Intussusception might occur from the same irritating cause, and may be the unsuspected starting point of many fatal cases of "obstruction" of the bowels. I knew one case, a young lady, who died in three days, from intussusception, after eating grapes.

The term typhlitis, according to Mr. Frederick Treves, is conveniently applied to a form of localized peritonitis occurring in the caecal region. In its general features and potentialities, this variety of localized peritonitis differs, he says, in no essential from other like-named conditions within the abdomen. The inflammation may spread to the general surface of the peritoneum. It may lead to abscess, or it may not. He states that it is unfortunate that the term typhlitis directs attention to the caecum, and the division of inflammation about the caecum into four classes—typhlitis, perityphlitis, paratyphlitis, and appendicitis—has long since been shown to be unsound. There is no evidence, he says, to show that primary inflammation of the walls of the caecum, independent of catarrh or ulceration of the mucous mem-

brane, exists; and inasmuch as both the cæcum and the appendix are entirely covered by serous membrane, a perforation in either of these organs cannot lead to suppuration of the connective tissue of the iliac fossa. Catarrh of the cæcum occurs in connection with a more general colitis, but the symptoms produced are those of colitis, and not of typhlitis.—(Discus. on Surg. Treat. of Typhlitis. *Brit. Med. Jour.*, Nov., '89.)

Notwithstanding this definition, many physicians believe that the primary lesion is in the cæcum, but the vermiform appendix seems to be, in nearly all cases, the offending organ, and the point of departure for all the trouble. Inflammation is started here by the presence of foreign substances, fæcal accumulations, seeds of fruit, bristles, pins, shot, and even pills. I remember a fatal case of typhlitis, in which, on post-mortem examination, hard pills were found in the appendix, and were doubtless the cause of death. Fæcal accumulations, or the lodgment of irritating matter in the bowel, without attacking the appendix, is the cause of the milder forms, by producing ulceration of the walls of the cæcum by pressure, and subsequent inflammation of contiguous peritoneum, and consequently the appearance of typhlitic symptoms. It may also be produced by external violence, by a fall, or by lifting, or force applied directly to the iliac fossa. I know a young man who carries the rod for a civil engineer and surveyor, who has had several attacks of typhlitis. General inflammation is set up in these cases, involving possibly not only the cæcum and appendix, but the connective tissue and peritoneum, or a localized inflammation may be confined to either of these parts.

Typhlitis in children usually presents itself in the acute form, or, at least, that is the aspect in which it first appears, or is generally seen, if otherwise than relapsing. It may follow a sub-acute attack, or the symptoms may develop slowly, and not be recognized until the full force of the disease is present. I. Simon maintains that it is always preceded in children by a long premonitory period. At first, constipation is the chief and only trouble; the stools are

hard, sometimes covered with slime; the cæcal region is tense, but little, if at all, painful. After an evacuation, which may be sudden and copious, it is lax. Later, after several months, sub-acute inflammation of the cæcum is set up, there is thickening, and a dull heavy pain, which may impede walking, and cause the child to assume an attitude suggesting coxalgia; dyspeptic symptoms and reflex disturbances may come on, with wasting, and suggest tubercular peritonitis and acute perityphlitis, or appendicitis may develop suddenly. He believes appendicitis is never primary, but always secondary to engorgement and inflammation of the cæcum.—(*Sup. Brit. Med. Jour.*, Nov., 1891, and *Rev. des Mal. de l'Enf.*, Oct. 9th.)

The initial stage having been set up, say in the cæcum or vermiform appendix, by some offending substance, such as faecal concretions, a foreign body, inspissated imprisoned mucus, or by twisting or strangulation of the appendix. The inflammation produced is communicated to the peritoneal covering, and subsequently to the connective tissue surrounding the cæcum, resulting in a suppurative process, and possibly abscess. The peritonitis may be only local, and circumscribed, or it may extend to the whole peritoneal surface. If the abscess, the result of suppurative peritonitis, proceeds unchecked, it may finally rupture into the abdominal cavity, or externally through the skin, or into the cellular tissue in its vicinity, or the pus may escape through any contiguous hollow viscus, as the rectum or bladder, and has even found its way through the diaphragm. This is the most serious form of the disorder, and is regarded by many surgeons as the most hopeless, unless early remedial relief is afforded by surgical interference. Prominent typhlitic symptoms are, however, frequently present in cases where the appendix is not, or only in a slight degree, implicated. Faecal impaction and hard substances, that cannot proceed, in their course, through the colon, are detained in the cæcum, partly, perhaps, in the appendix, and set up ulcerative processes, and, by contiguity, peritoneal inflammation, which may go on to suppuration or not. In a majority of the

cases suppuration does not supervene. Such substances may lie dormant for a long time without causing serious trouble—a date stone has been retained over six months before typhlitis occurred.

As said before, typhlitis, as it occurs in children, rarely proceeds to suppuration. Probably one cause of this may lie in the fact that children are more closely under the eye of their parents, and any deviation from health is sooner observed than in the adult, who will go about, often suffering more or less pain, without yielding to treatment, or attribute his ailment to some minor cause. A large majority—probably 90 per cent.—of the cases in children get well, or are relieved by medical treatment; and resolution is usually complete in all these cases. In adults, often the result of neglect, postponement, or indecision, it becomes a more serious matter, and surgical treatment has to be resorted to, when, if recognized earlier, or proper attention had been given before perforation took place, milder means would have sufficed for a cure. In children, also, the irritant is sooner or more easily dislodged from the appendix, and abortion or a cure sooner takes place.

After perfect relief, relapses may occur, varying in intervals and severity. Twelve to fifteen relapses or recurrences are known to have taken place in the same subject—finally necessitating operation. One attack does not give the patient complete immunity, but rather renders him more liable to the second, and the subject of such an attack ought to be warned against imprudencies which would render him liable to its recurrence.

So far as the relationship of typhlitis to tonsillitis is concerned, that is a mooted question. No evidence has yet been shown to authorize such a conclusion. On account of the large collection of lymphatic tissue at that part of the digestive canal, the disease is compared with other lymphatic inflammations, especially tonsillitis, and hence it has been termed “abdominal quinsy.” But this view is entirely imaginary, and based upon no collective investigation. While a few might adhere to such a belief, a majority of the

profession would not endorse it. It is too far from a proper line of argument, and no mere assertion would be sufficient to give it general approval. The two may happen simultaneously, and yet their etiology and pathological relations be entirely different. Complications may arise, two diseases may occur together, and run side by side, with no relationship between them. The one may modify the other, or give greater intensity or more seriousness, but that is all. The co-existence of pain in the thigh, testes, and urinary apparatus in typhlitis, is not a complication, but the usual course following extension of pain through the same system of nerves.

As regards the *treatment of typhlitis*, that will be governed by general principles. If seen early, before suppuration has occurred, purely medical treatment will be sufficient. Many physicians believe that all cases can be cured without operation; but I regard this as a dangerous doctrine, and should not be held up as a precedent. If suppuration, and evidence of an abscess having formed, are shown to be present, surgical means are our only reliance, the proper plan of procedure for which being left to the experienced operator.

1523 K Street N. W.

ART. VI.—Uses of Some Modern Antipyretics.

By J. WILTON HOPE, M. D., of Poquosin, York Co., Va.

It is an established fact that the antipyretic group of coal tar derivatives are useful, and almost indispensable, and it now remains for the therapist to determine their exact application and physiological effect.

With this object in view, I have made a careful investigation as to their range of usefulness and action on the human economy as affected by various morbid states, and, at the same time, have arrived at some conclusions of a mercenary nature.

The following comprise the most important and widely

used drugs of the group that I allude to—viz: Antipyrin, acetanilid (or antifebrin), antikamnia, and phenacetine. To a great number who may peruse this, there may be nothing of special interest in it, but some suggestions that I will present I do not remember seeing elsewhere.

Antipyrin has been so widely used that I will only speak of it comparatively. I have used it effectively in most of the diseases for which it is recommended. As an analgesic in the various forms of neuralgia, it is a decidedly effective remedy. In the treatment of sciatica, however, no striking results are attained. Used hypodermically as an anodyne, it is effective, but not nearly so potent as morphia. In articular rheumatism, it is not so beneficial as acetanilid or phenacetine—requiring fifteen to twenty grains at a dose to produce the same effect that may be accomplished with eight to ten grains of the last-named drug.

As an antipyretic in typhoid fever, continued malarial, and remittent fevers, pneumonia, rubeola, and other morbid states attended by pyrexia, each of the agents referred to has proved safe, reliable, and effectual; in no case—over one hundred in number—has there been any cyanosis or collapse.

After trying all the above-mentioned drugs, I have decided to use *acetanilid* in the majority of cases, for the following reasons: It is not patented (except when prescribed under the name of antifebrin), and can be obtained as cheaply per pound as the others per ounce.

When it is administered for its antipyretic effect, the dose can be steadily decreased when it is to be given for any length of time. Though it can scarcely be said to have "cumulative action," yet in continued pyrexia, after its continued use, at the end of two weeks, two grains will accomplish the same results that six grains will at the beginning of the attack.

There is not nearly so much danger to be apprehended from its effect as one would be led to believe from current literature. I have given it in hundreds of instances in doses ranging from two grains, to children of one year, to

twelve grains to adults, and have yet to see a case in which it produced any bad symptoms. But I would recommend that in any case of pyrexia the initial dose be not more than six grains.

As an analgesic, it can be given in larger doses safely.

Children bear a proportionately larger dose.

This conclusion I have arrived at after an extensive experience:—In many cases it seems to have an effect on the cause of pyrexia—in children especially—though this may be due to the ephemeral nature of infantile fevers.

It is certainly more safe than aconite and veratrum—the classic sheet anchors of the pyrexial state.

In some cases, minimum doses will cause profuse sweating, due, probably, to idiosyncrasy; and in these cases, if reduced doses (and these must be tried before resorting to other means) do not produce reduction of temperature with less perspiration, it had best be abandoned, although atropine, in doses of $\frac{1}{200}$ ths of a grain, will counteract this effect if combined with it.

Atropine would, I think, if occasion arise, prove an effective remedy for its depressive action.

In pneumonia, I have given it, with excellent results, every four hours, combined with quinia, till the temperature remained below 102 F.°. But it is well to bear in mind the expected crisis, as the sweating that frequently occurs at this time will often cause a subnormal temperature which might be attributed to acetanilid.

It can be *safely* given as an antithermic in typhoid fever—always bearing in mind the before-mentioned remark on decrease of dose when used for several weeks. I have given it for four or five weeks in a considerable number of cases of this fever, and I think my results will compare favorably with any other method used to combat pyrexia in this disease.

In simple remittent fever, a decided dose of eight or ten grains, followed in an hour by ten grains of sulphate of quinia, is most effective. The quinia should be repeated

every six hours till forty grains have been taken; then the acetanilid may be continued, in doses of five grains, for several days. It thus produces a period of apyrexia for two or three hours, materially aids the action of quinia, and shortens the attack.

Sciatica resists the action of all the remedies of this class, and one had better resort at once to deep hypodermic injections of morphia and atropia along the course of the nerve, as this is curative as well as anodyne.

Acetanilid, being cheap and apparently *effective as an antiseptic*, can be used as a local application for chancroids, ulcers, etc. It is non-irritating, but must be well-powdered to destroy its sharp crystals. The excruciating pains of dysmenorrhœa are benefited by ten grain doses, but the addition of an eighth of a grain of morphia enhances its efficacy and, at the same time, disguises the remedy. We should be guarded in using morphia in these cases, for such cases comprise a large quota of the army of morphine *habitués*.

In acute rheumatism, the above combination can be used with confident assurance to the sufferer of speedy relief.

I have never noticed the craving for acetanilid that follows the continual administration of morphia; nor, indeed, is there so much danger of the morphia habit when the morphia is administered in combination with acetanilid.

A most effective formula *for chronic malarial poisoning* is—

R_y—Acetanilid.

Salol.

Quinia sulph.....āā grs. xxiv.

M.—Ft. caps. No. xij. Sig.—One every six hours.

The above is also efficacious in many cases of continued fevers.

Phenacetine and antikamnia have fulfilled the above indications, but the cost being excessive, as compared with acetanilid, and the effect identical, I use the latter in the majority of cases.

Clinical Reports.

A Case of Colotomy for Stricture of the Rectum.

By B. F. LEONARD, M. D., of Washington, D. C.

During November, 1885, Mrs. M. E. S., widow, aged 37 years, presented herself at my clinic at the Baltimore Medical College. She had a pinched anxious look, was considerably emaciated, and she emitted a most offensive odor—this in itself being enough to debar her from obtaining employment.

On examination, the circum-anal integuments were seen to be of the brown color, characteristic of either malignant disease, or stricture of long standing. There was a constant dribbling per anum of offensive pus and thin fecal matter. Just above the internal sphincter, there was found a stricture of moderate calibre; above this, the rectal ampulla was large, empty, and marked posteriorly by a vertical linear ulcer of large size, the result of a partially healed fruitless proctotomy, done some months before by an eminent surgeon. About two or more inches above the sphincter, was another close stricture (aperture about one-quarter inch), the surrounding tissues being dense, resistant, and exquisitely painful. For obvious reasons no attempt was made to explore the gut above the stricture. The abdomen was prominent, and dull on percussion, and the patient was greatly debilitated by her prolonged suffering, as well as by a recent pneumonia.

Her history was negative as to syphilis. She had been twice married. She had no children nor abortions, and she had always enjoyed good health, with the exception of her rectal history.

This began in 1872. Between this date and 1877, she had several operations done for fistula in ano, and on one occasion a rectal polypus was removed. To this latter operation she attributed her consequent troubles, for contraction gradually took place until April, 1885, when the proctotomy was done; but re-contraction took place, so that when she came under my care, her last estate was worst than the first. In the meantime she had become a morphine fiend, consuming enormous quantities of the drug. Feeling absolutely hopeless of any other remedial measure, colotomy was proposed, and her willing consent obtained.

I performed left lumbar colotomy on her November 30th,

1885, in the presence of the staff and class. I followed Allingham and Tiffany's suggestions, incising the lumbar muscle for about one and a half inches. The kidney was found depressed, its lower border reaching two inches below the crest of the ilium. It was impossible to identify the colon by insufflation with air or water, or by the presence of the longitudinal bands. The decision was hesitatingly made on the facts of the size of the gut, its location and relation to the kidney. Only one who has had the experience can appreciate the difficulty in pathological cases—so different from the dissecting room—in reaching a conclusion. There was prolonged and obstinate oozings of blood from the cut muscle, which was finally controlled by compression with sponges wrung out of hot water (+ iodine 1 to 80), which was also used for the instruments.

On the second day she had a sharp attack of catarrhal pneumonia with a temperature of 103° F.; this declined on the fourth day, averaging $99\frac{1}{2}^{\circ}$ until the fourteenth day, when it became normal, remaining so until her discharge well on the thirtieth day.

The anterior portion of the wound healed by first intention, as did most of the posterior; but there were for some time in this two fistulous openings, at first large enough to admit tip of the little finger, gradually closing by granulation. It is noteworthy that sepsis did not occur, although it was impossible to prevent pus and even fecal matter from entering the abdominal cavity (but outside the peritoneum) by these inlets. During healing there was extensive cellulitis about the wound, and on its subsidence the parts were left discolored.

During the first few days there was a whitish discharge from the gut, giving rise to the disturbing suspicion that the small bowel had been opened; but on the sixth day, scybalæ commenced to pass in small, then enormous numbers, until in the second week she had normal alvine discharges twice daily through the new anus. The fecal dribbling per anum stopped within two weeks, and the pus ceased within two months, but the relief to pain was immediate and final.

As far as I can learn, this patient died in North Carolina in January, 1890, more than five years after the colotomy, but I have not been able to get any details. Perhaps this communication may meet the eye of her last attending physician; if so, I would be grateful to him for full particulars.

Her intervening history was uneventful, but not altogether satisfactory to herself. She recovered her health, and found surcease to her sufferings, but with drawbacks. Her artificial anus, even with the aid of a pad, was not entirely reliable as to time of action—it compelled instant attention, no matter what was on the tapis, and cleanliness demanded much time—making her life one “demnition grind.” This kept her out of service and made her melancholy as well as indigent. She had to rely on the kind charity of friends, entailing anxiety and short commons.

Again, the continued tendency to contraction necessitated occasional domicile in hospitals, where she had frequent opportunities of hearing the kind (?) criticisms of professional brethren.

Finally, the results of this colotomy were undoubtedly brilliant, and all was accomplished that could be reasonably expected; but even under the most favorable circumstances, the days of such a case are not halcyon, as I have feebly endeavored to show.

1328 *F. Street.*

Selected Cases from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

By JOHN DUNN, M. D., of Richmond, Va.

ONE OF THE PHYSICIANS TO THE INFIRMARY, ETC.

James B., white, age 19 years, anæmic. Right eye began to itch and burn on afternoon of January 18th; patient went to the drugstore, where he was given a small package of sugar of lead—told to put it in some water and wash his eye with it. He did so. Next morning his eye was immensely swollen, and discharging considerable matter. Later in the day he came to the Clinic. Lids red, œdematous, swollen, with discharge of pus coming from between them, presenting the picture usual in earlier stages in cases of gonorrhœal ophthalmia, with the exception that the dis-

* The numbering of these Cases refers to the order in which they are being selected by the author for record.

charge was not as profuse as is usual in such cases. Patient had no gonorrhœa. Palpebral and bulbar conjunctiva immensely swollen; cornea sunken in a pit, whose edges were much higher in the lower than the upper-half, where the congestion was so great that along the edges of the cornea the conjunctiva was almost purple. The cornea was showing already a slight haziness through its whole extent. Ice-cold chlorine applications and iodoform salve. After two days, the lids began to go down, the discharge remaining about the same. The conjunctival inflammation was, however, so severe that a membrane formed over it so as to involve the whole of the upper and lower palpebral parts of the conjunctiva; also that of the culs-de-sac, where, after a few days, the folds began to adhere together. This fibrinous deposit also appeared in the lower half of the ocular conjunctiva. Attempts to remove it caused the parts to bleed. At the end of a week, the lids were becoming much smaller, and considerable portions of the membranous deposit were disappearing. The cornea, in spite of daily, and twice daily, incisions radiating from the sclero-corneal junction in all directions, and of others in the conjunctiva, in the neighborhood of the cornea, continued to grow more and more hazy, the haziness being denser in the lower half. From the incisions very little blood would flow; they would then close, to show the following day a deposit of membrane along them. Under the influence of the cold applications, and of the salve, plentifully used to keep the underside of the lids greased, the lids went down to normal—the deposit on their underside disappeared. The cornea, however, became more and more cloudy, until about the thirteenth day; its superficial layers began to break down, and to separate from the lower layers in the forms of long, soft shreds; so that when the lids were separated, the cornea looked as if it were covered with a thin purulent secretion. Attempts to wipe this away showed that it was stringy, and attached to the cornea. This condition of the cornea continued until the eighteenth day, the cornea getting always thinner and thinner by the necrosing of its superficial layers, when it ruptured, and the aqueous escaped, the iris falling forward into the wound. This did not cause the sloughing of the cornea to cease; the sloughing of the cornea, little by little, continued until two-thirds of it had sloughed away. The conjunctival inflammation gradually subsided. About two weeks after the rupture of the cornea, the patient was taken with severe pain in the ball of this eye, probably beginning

irido-cyclitis. Severe sympathetic irritation appeared in the left eye; so that it became necessary to remove the right eye. Symptoms of sympathetic trouble in O. S. then disappeared. There was no complication in the healing of the wounds left from the enucleation.

Cases of membranous conjunctivitis are comparatively rare. This is the only case that has occurred at the Clinic within the past two years, and the cause of this case could not be ascertained. The patient was anæmic, and badly nourished, and considerable over-development of the adenoids of the pharynx and naso-pharynx pointed, in all probability, to one of two things—a scrofulous diathesis, or to a mucous membrane rendered unhealthy by disease, and kept so by neglect. The tendency of inflammation of the mucous membranes, in this patient, to assume a membranous form was further shown about three weeks after the removal of the eye, when, during an attack of non-diphtheritic sore throat, false membranes formed over both tonsils, and over the adjacent part of the pillars of the fauces. The inference, then, would seem to be a fair one, that the membranous condition of the conjunctiva was due to the patient's general unhealthy condition, rather than to any specific process; the same cause of inflammation in a healthy person would, it is not improbable, have produced simply one of the milder forms of conjunctivitis.

The secretions from the conjunctiva were never profuse enough to make its gonorrhœal origin probable. Although I was unable to find out the strength of the sugar of lead solution used by the boy, I cannot attribute the condition of the eye to its use. The eye was infected from some source. The point of chief interest in the case was to preserve the cornea; its early implication showing the severity of the inflammatory process. In these cases, the earlier the implication of the cornea the more unpleasant is the prognosis, as a rule. Within twelve hours after the inflammation appeared in the eye, the cornea became hazy. Incisions into the conjunctiva, which are sometimes of value, when the chemosis is great, were useless here, since on account of the

fibrinous deposit in the conjunctiva, scarcely any blood would flow from the cuts.

The value of cold applications in the acute conjunctival affections is shown by the readiness with which the inflammation of the lids in the case reported responded to them. It is a question, however, how much cold applications, applied to thickened and acutely inflamed lids, can modify the inflammatory condition of the ball. The repeated applications of iodoform salve were made both on account of its antiseptic properties, and for the purpose of lubricating the lids, and thus modify the effects of the rubbing of the inflamed conjunctiva against the ball, as well as to insure the removal of the secretions from the eye. It is also a question as to how thoroughly the patient complied with the instructions as to the use of the cold applications, wiping away the secretions, etc.

The cases require unremitting and most careful attention—things which circumstances often deny the usual Clinic patient.

There was never, at any time, an excessive amount of secretion from the eye. During the first few days, there was considerable purulent discharge, but it never became profuse, and it gradually got less and less. This was probably due to the use of cold applications and the salve. Towards the end of the second week, the culs-de-sac were swabbed with nitrate of silver—(30 grs.— $\bar{3}j$)—and immediately washed with saturated salt solution. A marked benefit in the condition of the conjunctiva of the cul-de-sac resulted from this application, great care having been taken to prevent the silver reaching the cornea. The salt solution washes away every trace of the silver, and leaves the conjunctiva clear and clean beneath.

In the presence of purulent secretions, silver can be safely and beneficially used, if the parts to which it has been applied be thoroughly washed afterwards with salt solution. And there are reasons for believing that its application (the necessary precautions in regard to the cornea being taken) hourly, or every two hours, would, were the secretion pro-

fuse, be of great value in shortening the duration of purulent conjunctivitis. In regard to the incisions to be made to relieve the cornea, in the earlier stages of the trouble, while the membranous deposit is going on, I cannot see that incisions are of much value, inasmuch as the bleeding from them is necessarily small in amount, and there seems to be reason for thinking that the incisions are lines for increased membranous deposit. When the acute stage of the trouble is over, incisions may be of benefit in hastening a healthy condition of the conjunctiva. The value to the corneal circulation of these incisions will depend upon the degree of damage done during the acute stages. In the case of James B. there must have existed, during the whole two weeks, some slight circulation in the cornea; else its destruction would have taken place earlier; the amount of nutrient fluid which reached the cornea was, however, too small to sustain its life. And we are to note here that the necrosis occurred first in the superficial layers of the cornea, extending then gradually through the whole thickness until perforation took place.

A Case of Ruptured Tubal Pregnancy.*

By F. B. BISHOP, M. D. of Washington, D. C.

Mrs. M., 28 years of age, married seven and one-half years, mother of two children, whose ages are 6 and 3½ years respectively. She was a tall, well-proportioned woman, rather on the blonde order. Both of her children were born after natural labors. She has had no miscarriage, and menstruation has always been regular, until last period, which was delayed five days. I have attended the family about five years, and during that time my services were required only twice for her before her last illness—once about three years ago, and again about six months ago, and on both occasions to relieve pain of dysmenorrhœa. She has always complained more or less of constipation.

On the morning of March 12th, she was, to all appear-

* Read before the Medical and Surgical Society of the District of Columbia, March 14th, 1892.

ances, unusually well, until about 11 or 12 o'clock, when at stool she was taken suddenly with vertigo, sick stomach, and a feeling as though she would faint. She was assisted to her lounge on the second floor, climbing a flight of stairs; after lying down she vomited, and I was immediately telephoned for. I received the message an hour later, and responded at once, and found my patient in a state of collapse. Drs. Chas. E. Hagner and Jno. H. Mundell were with her, and doing all in their power to revive her. Dr. Hagner thought her symptoms indicated internal hæmorrhage. She referred to her abdomen as the seat of pain. She gradually sank, and died about one hour after my arrival, or about 3 o'clock.

Autopsy by Dr. Jno. F. Moran twenty-four hours after death, in the presence of Drs. Hagner, Mundell, Harrigan, and Bishop.

Rigor mortis pronounced. Body well nourished, and external appearance normal. Slight tumefaction, with dullness on percussion over central portion of abdomen, tympanitic resonance over large intestines. Head not examined.

Thoracic viscera decidedly blanched.

Abdomen filled with clotted blood. Roughly estimated, nearly three quarts were removed. The viscera were carefully examined, and found to be normal.

Pelvic Viscera.—Uterus and right uterine appendages normal. Left ovary apparently normal; but the fimbriated extremity of the left Fallopian tube had completely lost its identity in the formation of an oval cyst, which I judge to have been two inches long, and one and one-half inch in its transverse diameter. This cyst was filled with blood and what appeared to be fibrin, with several bleeding points of rupture at its distal end. Another cyst of smaller size, and filled with a clear liquid was attached.

I submit the specimen for discussion by the Society.

"Coca" has maintained its reputation as a powerful nerve stimulant, being used with good results in nervous debility, opium and alcohol habit, etc. The highly variable character of the commercial drug makes it uncertain however. Robinson's Wine Coca (see page 28) we believe to be a uniformly active article, it being prepared from assayed leaves, the percentage of Cocaine being always determined by careful assay.

Correspondence.

The Victoria Hospital, St. Lucia, West Indies.

Mr. Editor:—The Victoria Hospital is situated on the north side of Castries harbor, on the west side of the island St. Lucia, one of the windward islands belonging to Great Britain. The hospital and adjacent buildings are built of stone, on a hill one hundred feet above the bay and about three-fourths of a mile from the wharves of Port Castries. It is the only institution of its kind on the island, and is supported by the government. No trees cast their shadows on the hospital—the sun pours its tropical rays directly on the buildings; but through its wards and passages blows a delightful breeze, making the hospital the most pleasant place in all Port Castries on a hot afternoon.

The hospital building is divided into nine wards, all on the same floor—no need for elevators. The average length of each ward is thirty-eight feet; width, twenty-five feet; height, fourteen feet. There are no ceilings in any of the wards—all are vaulted.

In the nine wards are one hundred and fifty beds; the air space allowed each patient being eight hundred and forty-five cubic feet. The floors are well raised off the ground, and excellent ventilation secured beneath them. Between each of the wards and separating them from the outer walls of the building, are passages five feet wide. In the roof of each ward are ventilators eighteen inches in diameter. The bedsteads used are iron. The mattresses are made of fibre from the cocoanut. This answers equally as well as hair, being a little heavier perhaps, but quite as cool and springy. When it is thought necessary to make over a mattress, the fibre is sent to the jail, where it is washed, teased out, and spread out to dry by the women prisoners. These latter do all the washing required by the hospital. The water supply is contained in two cisterns, one holding 30,000 gallons, the other 80,000 gallons. These are filled with rain water col-

lected from the roof of the hospital. From these cisterns the water is pumped by hand into a tank holding 5,000 gallons, set above a building in which are the kitchen, pantry, and store-room. From this cistern the water is lead to the operating room, lavatories, and fire plugs in various parts of the hospital and grounds. The daily allowance of water for each patient is twenty gallons.

There are two lavatories, excellently fitted up. The basins of white delf, swinging on trunnions on the transverse diameter of the rim, so that raising the edge nearest him, the patient can very easily empty the water. The basins may be lifted out of the supports, and so readily cleaned. The bath tubs are let into the floor about half their depth, and are built of the same material as the floor—brick and hydraulic cement.

On the north side of the main building, and a few feet away, is a small building containing the medical officers office, dispensary, and waiting room for patients. The patients are of various nationalities:—Natives of the island; those of neighboring islands; coolies lately landed, and those who have served their indentures; American Indians; mariners who have been taken sick in the harbor. Any one sick on the island may gain admission to the hospital on payment of the charge of three shillings per day—about seventy-two cents.

This being a government institution, the police and sick paupers are received at special rates.

On December 19th, 1891, there were 143 patients on the list. Among these, there were many cases of interest, *e. g.*, Coolie itch, idiopathic tetanus, an itch peculiar to the islands in this region, generally affecting the feet and ankles, characterized by intense itching and burning, followed rapidly by vesicles containing serum—some clear, others sanguineous. These coalesce, and finally the superficial layers of the skin come away, leaving the true skin exposed. No scars follow the disease, which lasts about ten days. The treatment used is the internal administration of Fowler's

solution, and the local application of spirits of turpentine after clipping the vesicles.

Many cases of malarial fever were present, also ulcers of the tibia; but the one of most interest to the curious visitor was one of "serpent" bite. By the "serpent," is always meant the "fer de lance," probably the most venomous snake of the Western hemisphere. Fortunately cases of "serpent" bite are now comparatively rare. Mr. Froudè states that at one time they were as common as cases of fever. The bite is followed by a great swelling, intense pain, depression, and almost in every case death. If the patient be reached in time, the treatment is the cautery and stimulants; later, measures to reduce the swelling, which often becomes so great as to strangle the bones of the part. In the hospital was a man who had lost his right little toe from the "serpent's" bite; he recovered, and in order to have both feet symmetrical, cut off his left little toe with his *machetá*.

Throughout the main and accessory buildings of the hospital, one cannot but notice the cleanliness, purity, and freshness of all the surroundings. In the wards, the linen is clean; the patients all bathe at least once a day, *i. e.*, those who are able to do so; for fever patients there are special regulations. The floors are white and spotless—the walls and paint-work looking as if they had just been washed down. The breeze blowing in the windows on one side, and out on the other side, carry out of the ward any odors that might arise.

The hospital is well equipped with modern apparatus and instruments, and all operations are done antiseptically. There is no ambulance service in the island; patients are brought to the hospital in carts, or in hammocks, swung on a pole carried by two men. During the year 1890, the daily average of patients was 74.6.

JAS. M. WHITFIELD, M. D.

Assistant Surgeon, U. S. N., U. S. S. "Chicago."

*Proceedings of Societies, Boards, etc.***MEDICAL AND SURGICAL SOCIETY OF THE
DISTRICT OF COLUMBIA.**

[LLEWELLYN ELIOT, M. D., Secretary, Washington, D. C.]

Meeting of March 14th, 1892.

Dr. Bovée read a paper on—

**The Effects of Pressure from Large Abdominal Tumors After
Their Removal. (See page 101).**

Discussion.—Dr. Sohon remarked that the sudden dangers of a rapid fall of blood pressure, occasioned by allowing vessels with a lack of tone from long-continued outside pressure to suddenly overfill, has long been taught in connection with the operation of paracentesis abdominis. It has also been recognized that the same danger threatens, at least during the first twenty-four hours. We are indebted to Dr. Bovée for giving due importance in such a concise way to the after-effects occasioned by this practical withdrawal of such a large amount of blood from the circulation, as far as the brain, heart, and especially the lungs, are concerned.

Dr. L. Eliot had witnessed many of the early operations of abdominal surgery in this city. Then, preliminary tapping was in vogue, and was often repeated, even after the diagnosis was certain; the spray and all the antiseptic precautions of the day were used; still the mortality was about fifty per centum. Patients were allowed to go too long before operation. But now no one pretending to abdominal surgery taps an abdominal cyst, except as a part of the operation for its removal. He thought as causes of death in operations of the abdominal cavity, we should rank too small an incision; operations for the purpose of making a record; operations against time; the inexperience of the operator; hæmorrhages from oozing surfaces; torn adhesions; delayed operations; shock from prolonged anæsthesia, and extensive cancerous growths. He did not think second operation or age were very prolific causes of death. He thought the statements that Mr. Lawson Tait could do an abdominal section in five or seven minutes, must be carefully weighed before accepting them, for we all know it takes, very frequently, more than that length of time to bring a patient under the anæsthetic, and this is as necessary a part of the operation

as shaving the abdominal walls, all of which Mr. Tait has done for him before he enters the operating-room; neither does he attend to the dressings. These statements have caused many operators to do careless work, even to the extent of leaving bleeding surfaces.

Dr. Morgan said that the cause of death in some cases, might be due to the anæsthetics acting on the kidney. If this organ is diseased with hypertrophied heart and diseased arteries, cerebral hæmorrhage may follow the use of anæsthetics.

Dr. Bishop said that Dr. Bovée's paper was interesting from the fact that so few cases were reported where the death of the patient was directly attributed to the removal of pressure by the tumor. He has no doubt that cases have died by bleeding to death into their own veins, but which deaths have been attributed to shock, clot, or anæsthesia. In regard to the effect of anæsthetics upon the heart and kidney, an interesting article read before the Southern Surgical and Gynæcological Association at its recent session in Richmond, Va., had been published in the *North Carolina Medical Journal* for February, by Dr. J. W. Long, entitled "Albuminuria; Its Relation to Surgical Operations." He gives the record of many cases in this country and in Europe, where the urine was examined both before and after the administration of ether. The consensus of opinion was largely in favor of the fact that ether had no bad effect, even when the kidneys were diseased, and in many cases, an existing albuminuria was temporarily suspended. With chloroform the record is not so good. As to the effect upon the heart, the anæsthetic used and the condition of the heart would have to be considered. Dr. Eliot is, however, personally in favor of chloroform in the great majority of cases in preference to ether.

Dr. Bovée, in closing, said that he does not believe in tapping any abdominal tumor that can be removed, except as a part of the operation for its removal; much worse is it to tap and wait a week for removal, as a distinguished surgeon of this city did a few weeks ago.

Dr. George Byrd Harrison reported—

A Case of Cerebral Hæmorrhage. (See page 112.)

Discussion.—Dr. Bishop said that the greatest number of cases of crossed paralysis, or alternate hemiplegia, according to Suckling, in which the facial nerve is involved, are due to a lesion in the lower half of one side of the pons,

below the decussation of the facial fibres, which takes place about the middle of the pons. In cases like the one before us, where the paralysis of the face and body is on the same side, the lesion might be anywhere from the motor centres in the cortex to the middle of the pons above the decussation of the facial fibres. The motor centres in the cerebral convolutions are arranged from above downwards—trunk, leg, arm, face, lips, tongue—their order being reversed from within outwards, as the fibres pass through the internal capsule and crus. The arm and face fibres lying near each other in the cortex, and their fibres running together throughout their course, would indicate a very minute lesion indeed, as only the arm and face fibres seem to be affected. He would say the most probable location would be that near the cortex, before the fibres converge, to pass through the internal capsule, as he thought a small lesion here would more easily affect the face and arm without involving other fibres. Softening, thrombus, embolus, and hæmorrhage, are the principal causes of hemiplegia. Softening and thrombus we may exclude, as the attack came on suddenly after exertion and more or less shock, and without any previous warning. The myosis in this case would again direct our attention to the pons, but might be produced by irritation of clot in other regions, especially that near the cortex. The rapidity with which the symptoms have subsided would favor embolus, and the history of the case and the age of the patient might indicate either embolism or hæmorrhage. A clot from the heart, or anywhere else, might be carried through the middle cerebral artery and plug a long nutrient artery at or below the cortex; or as Dr. Harrison has pointed out, the undue pressure might cause rupture of a miliary aneurism. He did not think the diagnosis was sufficiently clear to warrant, entirely, ignoring a possible lesion in the pons.

Dr. F. B. Bishop presented a specimen of

Ruptured Tubal Pregnancy, with the History of the Case. [See page 138.]

Discussion.—Dr. Bovée said that the specimen which Dr. Bishop presented was of great interest. The condition was one that could have been diagnosed very easily, and if the patient had been operated upon when first seen, as many such cases are, she might have recovered. She bled for four hours after being first seen. No doubt the case is one of ruptured tubal pregnancy, which condition ought always to

be suspected when called to a woman during her child-bearing age, who, while enjoying good health, and apparently without cause, suddenly collapses. This is all the more likely to be the condition if she has missed a recent menstrual period. The mere fact of not finding the fœtus or its membranes means nothing; it has escaped with the blood through the rupture, and is lost in the abdominal cavity. It occurred about five weeks after a menstrual period, and as the extremities of the fœtus bud at five weeks, we may well imagine how small an object we would have to search for in the mass of clots.

CHATTANOOGA MEDICAL SOCIETY.

[FRED. B. STAPP, M. D., *Secretary*.]

March Meeting, 1892.—**Maternal Impressions.**

Discussion of Dr. West's paper. [See page 115.]

Dr. Jas. E. Reeves related the case of Mrs. W., who, while with child, was suddenly seized with a jumping toothache, and instantly the child had spasms. He was sent for, but the child had recovered before his arrival. Six weeks afterwards she had exactly the same experience.

Another Case.—Before his third child was born, while the mother was three months' pregnant, a man with a sebaceous tumor, about the size of a filbert, on the side of his head, came to his office. In the presence of his wife, he removed the tumor, and the child was born with three little papillomata on the side of the ear. The mother had said she believed the child would be marked.

Dr. G. A. Baxter related a case told him by the late Dr. Fordyce Barker—viz: A woman of high social position, whose family relations seemed satisfactory, was said by her mother-in-law to be expecting a deformed child for this reason: While at the theatre, her hand resting on the arm of a seat, her husband placing his hand on two of her fingers, bore his whole weight on them, causing her almost to cry out in her extreme agony. This was in the early part of gestation. The child had two fingers amputated at the middle joint on one of the hands when born.

He also related a case in his practice where, during the infancy of the first child, it was fed on "Mellin's Food," and to amuse it, there was a picture of Mellin's baby in the room. The mother became pregnant during the infancy of

her child, and the next baby was almost a fac-simile of the Mellin baby.

He also told of two mulatto twins—one became a prostitute, while the other married a full-blooded negro. The latter had several children, and became finally so dark that one could hardly recognize her as the same person, while the former remained light.

He also related several cases in animals, where the mother's impressions seemed to have effect on her offspring.

Dr. E. A. Cobleigh thinks this subject is embraced in the science of teratology. It was fully believed in till the seventeenth century. Then it was taken up by the French Academy, and by the middle of the century there were many dissenters. The very few cases of "mother's marks" he had met with were not expected by the mother, while in many cases where the mother thought the child would be marked it was perfect. He read Dr. Dabney's reports, which were very exhaustive.

Dr. J. R. Rothmell thinks impressions made at an early period are more likely to have an effect than those at a late period of uterine gestation, when the child has been fully shaped. He related the following case: A pregnant woman who met one of the cripples which are usually to be seen on our streets, whose hands were distorted and limbs drawn up, was badly scared, and thought her infant would be misshapened. The child was born similarly distorted, and died. Four months afterwards, she again became pregnant, and, seeing another cripple, she was frightened, and her child was affected similarly to the first one. Again she became pregnant, and bore a healthy child.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

SECTION IN PEDIATRICS—NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 14th, 1892. Dr. W. P. Northrup, Chairman.

Persistent Ulcer of Thigh.

Dr. Mary Putnam Jacobi reported a case in a girl of four years. Upon admission to the hospital, there was an immense ulcer on the right thigh, covering its entire anterior and external surfaces, from the trochanter to the knee. This had originated seventeen weeks before, from a burn, caused by matches which had taken fire in the child's pocket. It was extensive at first, but had steadily increased in size, except at the lower portion, where some reparative process had taken place. Owing to the irritability of the child, it had been neglected, and, on admission, was covered with a thick grayish slough. There was considerable fever, the temperature ranging from 102° to 103° . Irrigation with a saturated solution of boracic acid and the use of zinc ointment, and a powder of salicylic and boracic acids was followed by disappearance of the fever, the surface of the ulcer assuming a better character. A number of skin grafts were made, four of which were successful; sponge grafts were applied unsuccessfully. After four weeks' treatment, the ulcer measured four-and-a-half inches by three-and-a-half inches. Although the grafts grew to be an inch in diameter, the ulcer steadily increased in size until it became six-and-a-half inches long. At the same time it assumed a grayish look, the entire appearance being that of a syphilitic ulcer. Under a dressing of mercurial ointment, it again became healthy. Iodide of potash was given internally, and for a time apparently with the best of results. Improvement then ceased, and the ulcer again assumed an unhealthy look. Bichloride of mercury was then added to the treatment (two-and-a-half months after the date of admission), and from that time improvement continued without interruption, and the ulcer had closed in six weeks—eight months from the date of injury.

The child showed no evidence whatever of syphilis, but there was no permanent improvement until anti-syphilitic treatment was instituted. The series of relapses was only arrested when the bichloride was added to the iodide of potash and iodide of iron. It was suggested that this did not necessarily mean that the ulcer was syphilitic in character,

for treatment by iodide failed. It is quite possible that the mercury administered with iron acted as a tonic. The obstinacy of the ulceration might be due to the fact that the original ulcer was caused by matches—burns by phosphorus being noted for their obstinate character.

A Membranous Cast of the Trachea

Was presented by Dr. S. K. Bremner. A girl seventeen months old had been suddenly seized with symptoms of laryngeal diphtheria, which became progressively worse. Intubation was performed sixteen hours after the onset, dyspnoea being the most urgent symptom. A one-year tube was used, but was at once coughed out. Before another tube could be introduced, and during a violent paroxysm of coughing, a complete cast of the trachea was expelled. A three-year tube was then introduced, and all dyspnoea and cyanosis were at once relieved. Quiet sleep followed, the child took her nourishment and stimulants well, and twelve hours after the intubation the symptoms were all improved.

A Case of Sarcoma of the Kidney.

Dr. Joseph O'Dwyer presented, through the Chairman, a case. The girl, three years and ten months of age, had been under observation but a short time, and the history was uncertain. There were no symptoms referable to the growth, and, as yet, no impairment of nutrition. A large firm mass could be felt in the left side just below the line of the umbilicus, and could be distinctly seen when the child was upon the back. Posteriorly, it could be detected in the lumbar region, and upon making pressure forward the whole mass could be felt to move freely. It was slightly nodular, and hard and tense to the feel. It caused no discomfort or pain, and was not sensitive to pressure. The urine contained a few blood-cells and broken granular and hyaline casts. It was, beyond doubt, a kidney tumor, possibly a carcinoma. Carcinoma is, however, rare at this age, while sarcoma, if not common, is the most frequent kidney growth.

The speaker referred to a specimen presented the night before at the New York Pathological Society by Dr. L. Emmett Holt. The patient was two years of age. A tumor had been discovered in the right side five months before. There was but little impairment of nutrition, and no definite symptoms. A diagnosis of sarcoma had been made, and confirmed by operation. The growth weighed two

and a quarter pounds, and was removed by lumbar incision. One week after the operation, the child was doing well.

But one result could be expected in the present case without operation. The mass would increase in size and the child would waste and die.

The Practitioner's Anatomy of the Respiratory Passages as Applied to Intubation, Laryngotomy, Tracheotomy, and Bronchotomy.

A paper with this title was read by Dr. James E. Kelly, and illustrated by charts, diagrams, and elaborate fresh dissections. Especial attention was given to the mechanical view of the subject, as being of far more value than the vast amount of detail to which the student is treated without a clue to its practical application.

The anatomy of the child varies but little from that of the adult. The *thymus* is the only structure that causes important modification in the region under consideration. In operating low down in the pre-tracheal space in young children, it causes serious obstruction. It varies greatly in shape, and is subject to numerous anomalies. It usually forms a body extending entirely across the space between the sterno-mastoid muscles. Two processes pass upward in close apposition to the tracheal fascia and terminate within half an inch of the isthmus of the thyroid to which they are attached by two ligamentous bands. Hence, but a limited portion of the trachea is uncovered and available for operation below the isthmus of the thyroid. This latter body is occasionally absent, and sometimes in an abnormal position—conditions which may be very puzzling to the operator.

It is possible to make a dissection in this region as neatly and almost as bloodlessly in the living subject as in the cadaver. This is especially true in young patients. The more closely an operation resembles a dissection, the more satisfactory it is to the surgeon, and the safer for the patient. Hap-hazard surgery is a lottery, in which fools play for their patients' lives.

In considering the anatomy of the region, the relations of the osseous structure are of much importance. The posterior surface of the larynx and trachea corresponds and adapts itself very closely to the contour of the anterior surface of the spinal column. The œsophagus and lower portion of the pharynx, which occupy but little space, are the

only structures between the trachea and the vertebræ. Thus the laryngo-tracheal tube, passing downward and backward, intersects the place of the sterno-mastoid muscles. This is a point of much practical importance in *low tracheotomy*.

Laryngotomy is an operation so undesirable that it merits but little attention. It opens the larynx just below the rima glottidis, where the canal is narrowed into a wedge, the thin edge being anterior. The cartilage is rigid, and of such low vitality, that the injury resulting from the separation, and the introduction of a tube, is liable to be followed by necrosis. There being but little subcutaneous tissue, an unsightly scar usually results, which lies so high that it cannot be concealed.

The hybrid operation, *laryngo-tracheotomy*, is unjustifiable, as it destroys the continuity of the cricoid cartilage upon which the larynx largely depends for its shape. All the external operations upon the respiratory passages are performed between the hyoid bone and the sternum, in the mesial line, between the sterno-hyoid and the sterno-thyroid muscles, but tracheotomy alone being done *below* the isthmus of the thyroid. Not an important structure lies above the isthmus, but below there are numerous important vessels. This lower space is analogous to a space just above the pubis. Two spaces are formed by two distinct layers of fascia, which are fused above the isthmus to form a single fascia. In the superficial space, are the anterior and transverse jugular veins, and a few small arteries. In the deep space are the left innominate, the inferior thyroid, and a venous plexus.

Much interest has, of late, been aroused in the operation of *bronchotomy* for the removal of a foreign body from a bronchus. The author is inclined to think that the operation is justifiable, and that there is no insuperable anatomical difficulty in the way. The cordate shape of the chest places the root of the lung much nearer the surface than is usually supposed. A vertical incision should be made through two or more costal cartilages, or through the ribs just internal to the mammary gland. This readily brings the structures into view, the relations of which are very close and intricate. While the mechanical difficulties are great, a still more important question is the possible effects of interference with the heart and great vessels. Upon this point little or nothing is known.

While *intubation* requires but little anatomical knowledge, there are certain points which are quite essential. The point of the tube may enter numerous depressions and fos-

sæ preventing its introduction. The first are the glosso-epiglottic fossæ, separated from each other by the frenum of the epiglottis. The glottis itself is situated in the midst of soft, yielding tissues, which are easily indented.

A slight depression exists just above the false vocal cords which may readily catch the tube. The latter ventricles of the larynx, are, however, the source of most serious trouble. These ventricles lie upon either side between the true and false vocal cords. The true cords, especially in phonation or stridor, approach more closely to the mesial line than the false, thus forming a cavity with a concave floor, in which the end of the tube is very easily entangled. Just behind the glottis, and separated from it by the arytenoid bodies, is the lower portion of the pharynx, the most capacious snare set for the operator, and the one into which he most frequently falls. This whole area in the infant is readily covered with the tip of the index finger. The surface of the glottis is, moreover, very oblique to the pharynx, so that the tube easily glides backward into that cavity. Unless the true cords are accurately reached, the point of the tube is deflected into the capacious and yielding ventricle.

The operation can, therefore, be performed with facility only when the tube is held parallel with the mesial line of the body, but obliquely to the long axis of the rima, and with the point directed toward the inferior margin of the cricoid cartilage. This can be effected by introducing the instrument into the mouth, with the handle over the bicuspid tooth, with the point of the tube directed forward toward the glottis. The common error is thus avoided of passing *over* the epiglottis. Owing to the more extended area opposed to the ventricles, the tube is not so liable to be caught in them. As the surface of the larynx containing the glottis does not look upward, but almost directly backward, the handle of the introducer should be elevated to bring the point of the tube forward.

In young children the epiglottis is sometimes so soft and small as to be found with great difficulty. Pass the finger low into the pharynx until the resisting cricoid cartilage is felt, on the upper margin of which are situated two movable nodules, the arytenoid cartilages. Immediately above, and in front of these in the mesial line, is the epiglottis.

Dr. H. D. Chapin said that he had performed tracheotomy several times upon children under two years, and had been surprised at the extreme obliquity of the trachea which caused it to lie at the great depth at the lower por-

tion. This was a strong argument in favor of intubation in young children instead of tracheotomy.

Dr. Kelly remarked that he believed that the narrowest point in the respiratory tract was at the true vocal cords.

The Chairman referred to experiments by Dr. O'Dwyer and himself, which proved that the *narrowest point* was not at the cords, but at the cricoid cartilage. An intubation tube could frequently be drawn, with the use of but little force, downward past the cords, which could not be made to pass below the cricoid. A tube much smaller than the prescribed size might drop below the cords, but would not pass below the cricoid into the trachea. The most recent modification of the tube approved by Dr. O'Dwyer, consisted in making the lower end bulbous in shape, and equal in size to the largest part of the tube. This would prevent its entering the ventricle of the larynx, a very frequent source of failure.

Dr. Kelly replied that if the tube were turned to the side as far as possible during introduction, it would bring the long diameter in position to act as effectually as the bulb described. The posterior operation of bronchotomy was impossible because of the closer apposition and less yielding character of the ribs requiring extensive resection. The trunks of the intercostal vessels were also met posteriorly instead of the branches.

MEDICAL EXAMINING BOARD OF VIRGINIA.

The First Semi-Annual Meeting of the Eighth Annual Session, was held in the Hall of the House of Delegates, Richmond, Va., April 19th, 20th, and 21st, 1892.

The First Meeting was called to order by the President, Dr. Hugh M. Taylor, Richmond, Va. Dr. Paulus A. Irving, having vacated his office by reason of his recent removal from Farmville to Richmond, was requested to act as Secretary *pro tem*.

The following members were present during the session: Drs. Budd, Chancellor, Clarke, Conway, Dillard, Douglass, Finney, Huffard, Harrison, Hicks, T. O. Jones, Michaux, Palmer, Patterson, Simmons, Taber, Hugh M. Taylor, T. James Taylor, Webster, Winston, and Young.

The President announced that since the last meeting Dr. T. B. Greer had died, and that Dr. Simmons had been com-

missioned by the Governor to fill the vacancy, and that Dr. P. A. Irving had resigned on account of his removal from the Farmville Congressional District, and that Dr. Joseph Southall, of Amelia, had been commissioned in his stead—both commissions having been issued in response to nominations by the Executive Committee of the Medical Society of Virginia.

A committee was appointed to draft suitable resolutions upon the death of Dr. Greer.

A resolution was adopted expressive of regret that Dr. P. A. Irving had to sever his connection with the Board, on account of his removal from his Congressional District.

The President, in his Annual Report, referred to the recently enacted amendments of the law regulating the practice of medicine and surgery in Virginia, and referred to attempts, by two quacks in different sections of the State, to secure acts by the Legislature to enable them to pursue their quackery without passing examinations before the Board according to law. In this connection he referred to the importance of members of the Board using their influence at home with their respective Delegates and Senators, instead of leaving all such influences to the Local Committee.

A resolution of thanks was tendered to Mr. F. H. McGuire, Attorney at Law, Richmond, Va., for the active interest and able services gratuitously rendered because of his sympathy with the objects of the Board, and his recognition of the fact that there is no State appropriation of funds out of which even the expenses of the Board may be paid.

On nomination, Dr. Jacob Michaux, of Richmond, Va., was elected Secretary and Treasurer for the unexpired term of Dr. P. A. Irving.

The remainder of the evening was spent in routine work, disposing of correspondences, etc., and in fixing upon questions for the examinations, to begin to-morrow at 9 A. M.

CHIEF FEATURES OF THE MEDICAL EXAMINERS' LAW.

As there are many interested parties who are yet uninformed, or else misunderstand the effect of the law regulating the practice of medicine, etc., in Virginia, we give a resumé of the requirements.

The amended act of the Medical Examining Board went into effect January 1, 1892. Any one having had a duly accredited license to practice medicine or surgery in his State prior to that date, and who furnishes satisfactory evidence

that he was so licensed, is exempt from the operations of the Virginia Medical Examiners' law. But any other party who, since January 1st, 1892, undertakes to practice medicine, surgery, etc., in Virginia for compensation or reward, without first having received a duly issued certificate of having passed a satisfactory examination before the Medical Examining Board of Virginia, and then having his name "registered in the clerk's office of the county or corporation court for the county or corporation in which he shall reside," is practising illegally; and on conviction before any of the courts of the Commonwealth, shall be fined "not less than \$50 nor more than \$100 for each offence, and shall be debarred from receiving any compensation for services rendered as such physician or surgeon."

All candidates for examination for license shall appear before the Medical Examining Board of Virginia during one or the other of the semi-annual meetings. One of these meetings occurs about the middle of spring of each year in the city of Richmond, and the other is held during the fall of each year—thus far invariably at the places and during the period of annual sessions of the Medical Society of Virginia.

Provision, however, is made for cases of emergency; but the claim of "emergency" must be decided by the President of the Board, after due inquiry into all the facts upon which the claim of emergency is based. If the claim of emergency is sustained by the President, then he shall appoint three members of the Board, to assemble at a given place and time, where and when the three members shall organize themselves into a committee, and, *in session*, examine the candidate or candidates for license, and pass upon the examination paper or papers as if the Board were in full session, and issue him a certificate which will allow him to practice until the next meeting of the Board, at which time he must be re-examined by the Board in session.

The President has authority to issue temporary permit to practise during vacations of the Board.

PLAN OF EXAMINATION.

Applicants for examination must be on hand from the beginning hour of the examination in each of the eight sections, and must not leave the examining-room until he has handed in his paper relative to the section questions then upon the blackboard. Two hours are allowed for exami-

nation in each section; but the effort is made to so arrange the questions that they may be perfectly answered in about half that length of time.

All examinations are conducted in writing.

Any party wishing to be examined should come prepared with the examination fee of *five dollars* required by law, and report immediately to the Secretary of the Board, who will be in the hall *half an hour* before the appointed time to issue in due form the certificates for examination.

Each candidate will have a desk or table assigned him by number, and he is expected to occupy only that desk during the examination.

Candidates are not allowed, during the progress of examination, to communicate with each other verbally or by note or sign. Visitors will not be allowed in the hall during the examination, except by official invitation of the Board, and under no circumstances will they be permitted to communicate with or interrupt the candidates during the time of the examination.

Candidates, in turning in their papers to the respective Chairmen of Sections, must sign them, not with their names, but with *the numbers* assigned them by the Secretary, which numbers are to be known only to the parties and the Secretary, and by which numbers only are the papers, as returned by the candidates, examined and marked by the respective Section Examiners.

The applicant is required to answer at least three-fourths of the questions satisfactorily; and he is to be rejected if he fails to answer satisfactorily thirty-three and one-third per cent. of the questions in any one section or sub-division of the whole examination.

The time of examinations on each branch has been reduced from three to two hours.

The officers of the Board are:

President—Dr. Hugh M. Taylor, of Richmond, Va.

Secretary and Treasurer—Dr. J. Michaux, of Richmond, Virginia.

Legislative Committee—Drs. Rawley W. Martin, of Chat-ham, Wm. P. McGuire, of Winchester, and Benj. Harrison, of Richmond, Va.

Executive Committee—Drs. Wm. L. Robinson, of Danville; Herbert M. Nash, of Norfolk; Robt. Glasgow, of Lexington, and the President and Secretary, *ex-officio*.

The Second Semi-annual Meeting of the Eighth Annual Session of the Board will be held during the week and at

the place of holding the Session of the Medical Society of Virginia.

The following Examination Questions, after full discussion by the Board, were adopted:

Examinations April 20th and 21st, 1892.

I.—SECTION ON CHEMISTRY.

Members:—Drs. P. B. Green, of Wytheville, *Chairman*; A. C. Palmer,* of Norfolk; Benj. Harrison,* of Richmond city, and T. O. Jones,* of Harrisonburg.

Ques. 1. What is chemical affinity? State the difference between a chemical combination and a mechanical mixture, and give an illustration of each.

Ques. 2. Give the general physical and chemical properties of the oxides, and state into what three classes they are divided.

Ques. 3. Give the source of iodine; state how it is obtained; give its physical and chemical properties, and a test for its presence.

Ques. 4. State the conditions under which the terminations -ide, -ic, and -ous, are used.

Ques. 5. Give synonym, chemical formula, mode of preparation, and physical uses of common alcohol.

Ques. 6. State the specific gravity and color of normal urine, and give a reliable test for the detection of sugar and of albumen in the urine.

II.—SECTION ON ANATOMY.

Members:—Drs. Hugh M. Taylor,* of Richmond, *Chairman*; Wm. P. McGuire, of Winchester; R. D. Hufard,* of Chatham Hill, and Joseph T. Southall, of Jetersville.

Ques. 1. Describe the ischium. Name the muscles attached to its tuberosity.

Ques. 2. Describe the radio-ulnar articulations. Give examples of synarthrodial, amphiarthrodial, and diarthrodial articulations.

Ques. 3. Describe the palmar fascia, fascia lata, and crural sheath.

Ques. 4. Describe the vas deferens, the vesiculæ semi-

* The * after names indicate that the parties were in attendance.

nales, and name the component parts of the spermatic cord.

Ques. 5. Describe the spinal cord, its membranes, fissures, and columns.

Ques. 6. What parts are divided in lateral lithotomy? What structures must be avoided in this operation?

III.—SECTION ON (I) HYGIENE AND (II) MEDICAL JURISPRUDENCE.

Members:—Drs. O. B. Finney,* of Onancock, *Chairman*; Thos. W. Simmons,* of Martinsville; J. E. Chancellor,* of Charlottesville, and Jas. W. Tankard, of Burgess' Store.

I.—*Hygiene.*

Ques. 1. Give distinction between antiseptics, disinfectants, and deodorants; name one of each class.

Ques. 2. Give best method of disposing of excrementitious matter and garbage of a city or town located on low and level ground.

Ques. 3. Describe important points in location and construction of public school-rooms.

Ques. 4. Give classification of foods; name some of each class, and the means of determining diseased animal food; the dangers likely to arise from use of same as a diet; *how prevented?*

II.—*Medical Jurisprudence.*

Ques. 1. How could you distinguish homicide from suicide by the appearance and location of wounds?

Ques. 2. State the difference in the character of the testimony of the ordinary witness, and that of the medical expert.

IV.—SECTION ON PHYSIOLOGY.

Members:—Drs. Robert Glasgow, of Lexington, *Chairman*; R. F. Young,* of Love's Mills; John W. Dillard,* of Lynchburg, and Wm. S. Christian, of Urbanna.

Ques. 1. State what is meant by *proximate principles*, and give general classification of same.

Ques. 2. Give physical and physiological properties of *gastric juice*.

Ques. 3. What are systole and diastole?

Ques. 4. What is the difference in function between the *anterior, lateral, and posterior* columns of the spinal cord?

Ques. 5. What effects follow section of the third cranial nerve?

Ques. 6. Describe the mechanism of *deglutition*.

V.—SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Members.—Drs. C. C. Conway,* of Rapidan, *Chairman*; A. Trent Clarke,* of South Boston; S. W. Budd,* of Petersburg; Jas. Parrish, of Portsmouth, and M. A. Douglass* (Homœop.), of Danville.

Ques. 1. What is the difference between rational and empirical therapeutics?

Ques. 2. What are the physiological action and therapeutic uses of the ammonia preparations.

Ques. 3. What is the difference in the physiological and therapeutic action of aconite, gelsemium, and veratrum viride?

Ques. 4. Give the dose of nitrate silver; its incompatibilities and therapy.

Ques. 5. Explain the difference between cardiac stimulants and tonics, and name the principal agents in each class, with dose of each.

Ques. 6. Give the name, nativity, botanical description, and parts used, of the plants from which are derived belladonna, stramonium, and colocynth.

Ques. 7. Give the physiological and therapeutic action of the alkaloids of belladonna, calabar bean, and jaborandi.

Ques. 8. Explain what is meant by chemical, pharmaceutical and therapeutic incompatibility.

[To be answered only by those who propose to practice homœopathy.

Ques. 1. Give the mind symptoms of aconite.

Ques. 2. What are the leading characteristics of opium.

Ques. 3. What are the physiological effects of belladonna?

Ques. 4. What is cinchona, and what are some of its leading effects upon the human system?

Ques. 5. Give the effects of sepiæ upon the female sexual organs.

Ques. 6. What are the symptoms of berberis upon the urinary organs?

Ques. 7. What are the symptoms of bryonia in typhoid fever?

Ques. 8. What are the symptoms of æsculus in hæmorrhoids?]

VI.—SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Members:—Drs. Herbert M. Nash, of Norfolk, *Chairman*; B. L. Winston,* of Hanover C. H.; G. D. Meriwether, of Buena Vista; H. M. Patterson,* of Staunton, and George A. Tabor* (Homœop.), of Richmond city.

Ques. 1. Give clinical history and treatment of uncontrollable or pernicious vomiting in pregnancy.

Ques. 2. Give the indications demanding, and methods of inducing *premature* labor.

Ques. 3. Give the symptoms of *puerperal* eclampsia, its treatment during and after labor.

Ques. 4. Give the management of a natural labor—cephalic presentation.

Ques. 5. Give the symptoms, diagnosis, and treatment of *pelvic* cellulitis.

Ques. 6. Give definition, varieties, what to be diagnosticated from, and treatment of pelvic hæmatocele.

VII.—SECTION ON PRACTICE OF MEDICINE.

Members:—Drs. Rawley W. Martin, of Chatham, *Chairman*; Bedford Brown, of Alexandria; R. I. Hicks,* of Warrenton; T. James Taylor,* of Walthall's Store, and W. P. Jones (Homœop.), of Petersburg.

Ques. 1. Describe the symptoms and course of a typical case of variola.

Ques. 2. Give diagnosis of chorea.

Ques. 3. Give the anatomical changes—the results of pericarditis.

Ques. 4. Give the etiology and method of production of emphysema.

Ques. 5. Give the treatment of scobutus.

Ques. 6. What ocular changes may we expect to find in granular kidney?

Ques. 7. Give the symptoms of catarrhal enteritis.

Ques. 8. Describe the morbid anatomy of acute peritonitis.

VIII.—SECTION ON SURGERY.

Members:—Drs. Wm. L. Robinson, of Danville, *Chairman*; Leigh Buckner, of Roanoke; Jacob Michaux,* of Richmond city; Kent Black, of Blacksburg, and F. Webster,* (Homœop.), of Norfolk.

Ques. 1. State the diagnosis and treatment of fracture of the patella.

Ques. 2. Give the differential diagnosis between concussion and compression of the brain.

Ques. 3. Describe ligation of the femoral artery in Scarpa's space.

Ques. 4. Describe the operation for supra-pubic cystotomy.

Ques. 5. Give causes and treatment of aneurism.

Ques. 6. Give the differential diagnosis between hydrocele, scrotal hernia, and varicocele.

MEMBERS OF THE MEDICAL EXAMINING BOARD OF VIRGINIA,
AS CONSTITUTED APRIL 19th, 1891.

Dr. Bedford Brown,	..	..	..	Alexandria, Va.
" Kent Black,	..	..	..	Blacksburg, Va.
" Leigh Buckner,	..	..	..	Roanoke, Va.
" S. W. Budd,	..	..	..	Petersburg, Va.
" J. E. Chancellor,	..	..	..	University of Virginia.
" A. Trent Clarke,	..	..	..	South Boston, Va.
" C. C. Conway,	..	..	..	Rapidan, Va.
" Wm. S. Christian,	..	..	..	Urbanna, Va.
" J. W. Dillard,	..	..	..	Lynchburg, Va.
" M. A. Douglass,	..	..	..	Danville, Va.
" O. B. Finney,	..	..	..	Onancock, Va.
" Robt. Glasgow,	..	..	..	Lexington, Va.
" P. B. Green,	..	..	..	Wytheville, Va.
" R. D. Huffard,	..	..	..	Chatham Hill, Va.
" Benjamin Harrison,	..	..	..	Richmond, Va.
" R. I. Hicks,	..	..	..	Warrenton, Va.
" T. O. Jones,	..	..	..	Harrisonburg, Va.
" W. P. Jones,	..	..	..	Petersburg, Va.
" Rawley W. Martin,	..	..	..	Chatham, Va.
" Wm. P. McGuire,	..	..	..	Winchester, Va.
" G. D. Meriwether,	..	..	..	Buena Vista, Va.
" Jacob Michaux,	..	..	..	Richmond, Va.
" Herbert M. Nash,	..	..	..	Norfolk, Va.
" A. C. Palmer,	..	..	..	Norfolk, Va.
" Henry M. Patterson,	..	..	..	Staunton, Va.
" James Parrish,	..	..	..	Portsmouth, Va.
" Wm. L. Robinson,	..	..	..	Danville, Va.
" Thomas W. Simmons,	..	..	..	Martinsville, Va.
" Joseph Southall,	..	..	..	Jetersville, Va.
" Geo. A. Taber,	..	..	..	Richmond, Va.
" Jas. W. Tankard,	..	..	..	Burgess' Store, Va.
" T. James Taylor,	..	..	..	Walthall's Store, Va.
" Hugh M. Taylor,	..	..	..	Richmond, Va.
" F. Webster,	..	..	..	Norfolk, Va.
" B. L. Winston,	..	..	..	Hanover C. H., Va.
" R. F. Young,	..	..	..	St. Clair's Bottom, Va.

ALPHABETICALLY ARRANGED LIST OF THE APPLICANTS FOR EXAMINATION TO WHOM
 LICENSES WERE GRANTED TO PRACTICE MEDICINE IN VIRGINIA, AFTER DUE
 EXAMINATION APRIL 20TH AND 21ST, 1892, WITH THEIR
 POST-OFFICES, COLLEGES AND YEARS OF GRADUATION.

<i>Name.</i>	<i>Post-Offices.</i>	<i>College of Graduation.</i>	<i>Year.</i>
Dr. Julian Hammer Abbitt.....	Nebraska, Va.....	Coliege Phys. and Surg., Balt.....	1892
" Geo. F. Bagby.....	Suffolk, Va.....	Pulte Medical College	1892
Mr. John Robt. Bagby, Jr.....	Stevensville, Va.....	(Non-Graduate)	
" Jos. Nicholson Barney, Jr.....	Fredericksburg, Va.....	(Non-Graduate)	
Dr. H. Singleton Belt.....	Chatham, Va.....	University of Maryland.....	1892
" Aubrey R. Bowles.....	Richmond, Va.....	University of Maryland.....	1892
" Claude J. Bradshaw.....	Carrsville, Va.....	Medical College of Virginia...1892	
" Jas. Beverly Deshazo.....	Narrowbone, Va.....	Bellevue Hos. Med. Col.....1892	
" Lemuel Leslie Eley.....	Suffolk, Va.....	University of Maryland.....1892	
" Stephen Douglass Few.....	Dayton, Va.....	University of Maryland	1892
" John B. Fisher.....	Quinton, Va.....	Medical College of Virginia...1892	
" Norborne F. Greer.....	Rocky Mount, Va.....	University of Maryland.....1892	
" Edward F. Hamilton.....	Boydton, Va.....	Medical College of Virginia...1892	
" Frank Scott Hasker.....	Richmond, Va.....	Medical College of Virginia...1892	
" Jabez M. Harman.....	Topeca, Va.....	University of Louisville.....1891	
" Edward Alex. Hatton.....	Portsmouth, Va.....	Col. Phys. and Surg., N. Y.....1891	
" Hugh Wm. Henry, Jr.....	Staunton, Va.....	University of Maryland.....1891	
" J. Eldridge Huff.....	Floyd Courthouse, Va.....	Col. Phys. and Surg., Balt.....1892	
" Rolfe E. Hughes.....	Columbia, Va.....	University of Maryland.....1892	
" Edwin Jackson Jones.....	Doe Hill, Va.....	Col. Phys. and Surg., Balt.....1892	
" Marshall Price Jones.....	Palo Alto, Va.....	Col. Phys. and Surg., Balt.....1892	
" D. M. Kippe.....	Burlington, W. Va.....	Col. Phys. and Surg., Balt.....1888	
" Chas. B. Lee.....	Crawford, Va.....	Louisville Medical College....1891	
" Daff Green Lewis.....	Kabletown, W. Va.....	University of Virginia.....1891	
" J. Newton Lewis.....	Kabletown, W. Va.....	Col. Phys. and Surg., Balt.....1892	
" Wm. Latané Lewis.....	Miller's Tavern, Va.....	University of Maryland.....1891	
" C. Rosser Massey.....	Post Oak, Va.....	University of Maryland.....1892	
" Emmett W. Meade.....	Dickensonville, Va.....	Medical College of Virginia...1892	
" Henry S. Myers.....	Fork of Buffalo, Va.....	Medical College of Virginia...1892	
" William P. Norris.....	Waynesboro, Va.....	Louisville Medical College....1892	
" Phillip Percy Parrish.....	Covington, Va.....	University of Maryland.....1892	
" R. Ernest Poole.....	Petersburg, Va.....	University of Maryland.....1892	
" John M. Ragland.....	New York, N.Y. (305 W. 13) Bellevue Hosp. Med. Col.....1892		
" Otto M. Roberts.....	Richlands, Va.....	Miami Medical College.....1877	
" George Lee Smith.....	Minnecola, Va.....	Col. Phys. and Sng, Balt.....1892	
" James H. Smoot.....	Woodstock, Va.....	University of Maryland.....1892	
" Dennis Spaulding.....	Hosp. of U. of Md., Balt.....	University of Maryland.....1891	
" Alvah Stone.....	Alvah, Va.....	Louisville Medical College....1891	
" Chas. Murion Strickler	(Shenandoah County), Va.....	Medical College of Virginia...1892	
" Arthur P. Summers.....	Max Meadows, Va.....	University City of N. Y.....1890	
" Fielding Lewis Taylor.....	Charity Hosp., N. Y. City.....	University of Virginia.....1891	
" Chas. Robertson Vance.....	Bristol, Tenn.....	University of Virginia.....1891	
" William J. Wallis.....	Coakley, Va.....	Col. Phys. and Surg., Balt.....1892	
" Forest Ashton Williams.....	Avon, Va.....	Medical College of Virginia...1892	

Nos. of examination papers.	LIST OF INSTITUTIONS WHOSE GRADUATES WERE REJECTED BY THE MEDICAL EXAMINING BOARD OF VA., AT ITS REGULAR SPRING SESSION, APRIL 20TH AND 21ST, 1892. With Percentage Marks received in each Section.	Chemistry.	Anatomy.	Hygiene and Med. Jurisprudence.	Physiology.	Materia Medica and Therapeutics.	Obstetrics and Gynecology.	Practice.	Surgery.	Aggregate.	Average percentage	Remarks.
5	University of Maryland.....	41	53	96	75	64	77	90	71	567	71	
10	".....	64	34	50	80	46	70	85	64	493	62	
13	Medical College of Philadelphia.....	70	38	85	45	90	74	78	75	555	69	
21	University of Maryland.....	71	34	75	30	60	73	85	70	498	63	
24	".....	80	43	90	50	78	75	83	74	573	71	
27	University of City of New York.....	65	55	40	65	75	80	75	68	523	65	
29	College Physicians and Surgeons, Baltimore..	75	75	75	70	78	62	88	67	590	73	
30	University of Maryland.....											withdrew.
31	College Physicians and Surgeons, Baltimore..	70	70	75	40	75	73	75	79	557	69	
33	Medical College of Virginia.....	74	60	55	75	70	86	78	90	588	73	
34	College Physicians and Surgeons, Baltimore..	38		34	30							withdrew.
37	Non-Graduate.....	72	37	80	55	50	73	75	83	525	65	
40	College Physicians and Surgeons, Baltimore..	56	55	85	42	80	77	65	87	547	68	
42	Baltimore Medical College.....	45	53	75	78	48	73	70	68	510	63	
43	Baltimore University School of Medicine ..	65	34	95	75	64	71	83	75	562	70	
45	University of City of New York.....	50	40	85	35	75	77	95	64	521	65	
46	Jefferson Medical College.....	54	52	60	53							withdrew.
48	University of Maryland.....	75	34	90	75	88	69	86	50	567	71	
49	Vanderbilt University.....	50	34	35	50	78	33	65	85	440	54	
50	Michigan College of Medicine and Surgery ..	78	22	75	75	53	75	80	70	528	66	
51	College Physicians and Surgeons, Baltimore..	55	60	75	45	76	63	50	67	491	61	
55	University of Maryland.....	87	63	85	45	77	64	81	80	582	73	
56	Baltimore Medical College.....	50	40	50	60	70	76	83	82	511	64	
60	Medical College of Virginia.....	70	25	70	65	65	75	84	78	532	67	
61	Non-Graduate.....	56	40	50	55	69	75	75	64	484	60	
67	Hahnemann College, Philadelphia.....	60	26	45	70	98	88	73	91	546	68	
70	Non-Graduate.....	60	52	95	34	51	75	71	78	516	64	

INSTITUTIONS REPRESENTED BY THE APPLICANTS
WHO CAME BEFORE THE
MEDICAL EXAMINING BOARD OF VIRGINIA,
IN SESSION IN RICHMOND, VA.,
April 20th and 21st, 1892.

	Total Number Applicants from each College.	Total number Applicants Licensed from each College.	Total Number Applicants Rejected from each College.	Withdrawals.
University of Virginia.....	3	3		
Medical College of Virginia.....	10	8	2	
University of Maryland.....	20	13	6	1
College Physicians and Surgeons, Baltimore.....	13	8	4	1
Baltimore Medical College.....	2		2	
Baltimore University School of Medicine.....	1		1	
Jefferson Medical College.....	1			1
Hahnemann Medical College and Hospital, Philadelphia.....	1		1	
University of City of New York.....	3		2	
College Physicians and Surgeons, New York.....	1	1		
Bellevue Hospital Medical College, New York.....	2	2		
Louisville Medical College.....	4	3		
University of Louisville.....	1	1		
Vanderbilt University.....	1		1	
Miami Medical College.....	1	1		
Pulte Medical College.....	1	1		
Medical College of Philadelphia.....	1		1	
Michigan College of Medicine and Surgery.....	1		1	
Non-Graduates.....	5	2	3	
Totals.....	71	44	24	3

INSTITUTIONS REPRESENTED BY THE APPLICANTS

BEFORE THE

MEDICAL EXAMINING BOARD OF VIRGINIA,

FROM THE ORGANIZATION OF THE BOARD,

January 1st, 1885, to April 21st, 1892.

	Total number of appli- cants for examination from each institution.	Total number awarded certificates.	Total number rejected.	Incomplete examinations, withdrawals or otherwise unfinished examinations.
Medical College of Virginia	99	83	12	4
University of Virginia—Medical Department.....	60	59	1	
National Medical College, Washington, D. C.	1		1	
University of Georgetown, D. C., Medical Department.....	1	1		
Georgetown College, Washington, D. C. (name incorrect).....	1		1	
Howard University, Medical Dept., Washington, D. C. (Colored)	17	3	14	
University of Maryland, School of Medicine.....	94	67	26	1
College of Physicians and Surgeons, Baltimore.....	70	50	17	3
Baltimore Medical College	13	3	8	2
Baltimore University—School of Medicine.....	5		5	
Washington University, Baltimore, (Extinct).....	1			1
University of Maryland and Baltimore Medical College.....	1		1	
Jefferson Medical College.....	29	20	8	1
University of Pennsylvania—Medical Department	4	4		
Medico-Chirurgical College of Philadelphia.	1		1	
Medical College of Philadelphia (name incorrect).....	1		1	
Woman's Medical College of Pennsylvania	1	1		
Hahnemann Medical College and Hospital (Homœopathic)	3	2	1	
University of the City of New York—Medical Department.....	23	15	8	
University of New York (name incorrect)	1		1	
University of Virginia and New York.....	1	1		
Bellevue Hospital Medical College, New York.....	13	13		
University of Va. and Bellevue Hospital Medical College.	1	1		
College of Physicians and Surgeons, New York.....	8	7	1	
Geneva Medical College, New York (extinct).....	1	1		
Long Island College Hospital, Brooklyn.....	1		1	
Yale Medical School, New Haven.....	1	1		
University of Vermont, Burlington	1		1	
Miami Medical College, Cincinnati	2	2		
Cincinnati Medical College.....	1		1	
Columbus Medical College.....	3	2	1	
Homœopathic Hospital College, Cleveland	2	2		
Pulte Medical College, Cincinnati (Homœopathic).....	1	1		
Louisville Medical College.....	10	4	6	
University of Louisville—Medical Department.....	6	3	3	
Kentucky School of Medicine, Louisville.....	2	2		
Hospital Medical College, Louisville.....	7	4	3	
Vanderbilt University, Nashville	4	3	1	
University of Tennessee, Nashville.....	1	1		
Leonard Medical College, Raleigh (Colored).....	7	5	2	
Medical College of State of South Carolina, Charleston.....	1	1		
Southern Medical College, Atlanta.....	2		2	
Atlanta Medical College	1		1	
Tulane University—Medical Department—New Orleans.....	1	1		
University of Louisiana (probably Tulane University).....	1	1		
St. Louis Medical College, Missouri.....	1	1		
Detroit Medical College, Michigan.....	2	2		
University of Michigan—Medical Department, Ann Arbor.....	2	2		
Michigan College of Medicine and Surgery, Detroit.....	1		1	
Chicago Homœopathic Medical College.....	1	1		
University of Heidelberg, Germany	1	1		
St. George Hospital, London	1	1		
King George Hospital, London.....	1		1	
King College, London	1		1	
Colleges unknown.....	6	4	1	1
Non-Graduates.....	42	14	23	5
Total Examinations and Results.....	564	391	155	18

*Analyses, Selections, etc.***Treatment of Extra Uterine Pregnancy.**

Dr. D. C. Brockman, of Marengo, Iowa, states (*The Vis Medicatrix*, April, 1892), that Dr. Formad, one of the coroners of Philadelphia, estimates that about forty women die in that city each year from ectopic gestation, without a previous diagnosis. Dr. Parvin estimates its frequency to be about 1 to 500 cases of pregnancy. Dr. Baldy, of Philadelphia, estimates that about 500 cases occur each year in the United States.

Dr. Brockman believes that extra-uterine pregnancies, practically speaking, begin in the tubes, from which they are expressed, if lodged too near the abdominal end, or are washed out of the ruptured tube into the peritoneal cavity, and there continue to grow—the *abdominal variety*. If the ovum reaches near the uterine end of the tube, we have *tubo-uterine or intestinal variety*. Parry, Speglenberg, Sextorph, and others, believe that pregnancy may continue in the tube to term, and cite cases.

The most generally accepted theory as to the cause, is that disease or deformity of the tube prevents the ovum from reaching the uterus, but does not prevent the spermatozoa from traversing the tube. But exceptional cases prove that abdominal pregnancy may occur directly through an opening in the uterus, as after a hysterectomy, etc. The impregnated tube lies along the upper border of the broad ligament, so that about one-third of the sac dips down between the folds of the peritoneum forming the ligament; while about two-thirds are covered only by the peritoneum that separates it from the abdominal cavity. Now if rupture occurs in the upper part of the sac, the contents will empty into the peritoneal cavity, where the foetus may possibly continue to develop. But as the sac usually ruptures through the placenta, the blood-vessels are torn across, and profuse fatal hæmorrhage occurs into the abdominal cavity. But some cyst rupture downward into the broad ligament, where there is not room for much blood; so that the woman usually survives, while the foetus may die and be absorbed along with the effused blood; or it may live and develop below the peritoneum, forming *sub-peritoneo-pelvic variety*. In either case pregnancy may go to term when labor pains come on and continue for several hours, during which time

fœtal movements are usually active; then they grow weaker, and soon all signs of fœtal life are extinct. The pregnant tumor diminishes in size, with disturbance of the physical condition of the patient. The fœtus may thus remain for years—sometimes over half a century—with but little trouble; or it may suppurate, or open and discharge as a large abscess.

The *prognosis* of extra-uterine pregnancy is most grave; perhaps nine tenths of the mothers die during its course.

Diagnosis before rupture is difficult. And yet some cardinal diagnostic points consist in a history of menstrual suppression following a period of sterility, nausea, changes in breast, darkening in color of the vaginal walls, notably on the side in which the pregnant tube is situated; there is an unusual amount of pain on one side of the uterus, of a tearing, boring character. From the sixth to eighth week, a slight and often persistent hæmorrhage occurs from the uterus, accompanied in most cases by the discharge of a uterine decidua. Vaginal examination reveals a tumor from the size of an egg to that of an orange on one side or behind the uterus, usually movable, closely simulating an ovarian or parovarian tumor, but generally more tender than either, and located nearer the uterus. It is more oval than either hydro- or pyosalpinx, and not attended by fever as are pus collections. The uterus itself is notably enlarged and slightly movable, cervix soft, canal patulous. Between the fifth and twelfth week, possibly later, the patient will be seized with severe pelvic pains, which grow rapidly worse, and are soon followed by dangerous collapse, indicating rupture of the tube. When the rupture is down into the broad ligament, we find a tense cyst of considerable size on one side of the uterus. Where effusion occurs in the peritoneal cavity, it causes an illy-defined fullness in the pelvis, with fluid in the abdomen, which, however, is not always discovered. Do not forget that "feeling" by the doctor of the fœtal extremities through the vagina, as if separated only by a thin membrane, or through the abdominal wall, as if they were just under the skin, is *not* conclusive evidence of extra-uterine pregnancy, for cases are recorded where exactly this "feeling" has occurred in the practice of the best of abdominal surgeons, and yet the case was one of *uterine* pregnancy.

As for treatment, Dr. Brockman wrote to a number of abdominal surgeons, and systematized their replies as follows:

1. If a case of extra-uterine pregnancy is discovered *before the twelfth week*, what treatment?

Drs. Battey, Emmet, Thomas, Mundé, Skene, and McLean, would *destroy fœtus by electricity*. Sir Spencer Wells would generally use electricity. Sutton would use it if patient was very weak or unfit for laparotomy; otherwise remove ovum. Byford would use it before eighth week; but if later, would remove tube. Except in very favorable cases, Engelmann *prefers the knife*. Joseph Price, Harris, Baldy, Goodell, Tait, A. Martin, Gusserow, Kaltenbach, and C. Braun, would remove the ovum.

2. *At a later period, but before viability*, where the patient and pregnancy have survived rupture, Harris, Price, Case, Braun, and Gusserow, remove ovum as soon as diagnosis is made. Wells thinks it safest to remove ovum. Kaltenbach, Goodell, Byford, Sutton, McLean, and Emmet wait for viability, so as to try save both child and mother. Tait would do all he could to save a living child. Engelmann would wait for viability only if conditions are favorable. Battey would operate at once if symptoms are grave. Skene would wait till foetal death, as then the mother's chances for recovery are best.

3. *Management of placenta*. To deal properly with the sac and placenta requires all the surgical skill and ingenuity one can bring to bear on the case. Emmet would not attempt to remove placenta. Thomas, McLean, Wells, Battey, would leave placenta, and drain. Engelmann would probably drain. Braun and A. Martin would remove it. Kaltenbach, Gusserow, Skene, Mundé, would remove it where possible; if not, leave it and drain. Sutton, Byford, Goodell, Joseph Price, would govern themselves by the case in hand. Tait washes out and leaves placenta, closes sac, and waits for disturbance, if any is to occur. Lusk ligates the large vessels going to the sac, and removes it as entire as possible.

Holmes (Chicago), shows that in most cases, the contents of pregnant tubes are septic, and hence not safe to leave in the pelvis. Early operations give a mortality of only 4 to 6 per cent. (Wylie says we should not have more than one death in 200 to 300 such operations). And as a case is likely to be a hydro- or a pyo-salpinx as an ectopic pregnancy, Dr. Brockman thinks we should remove the diseased mass at the earliest moment.

All agree that the only *treatment after rupture* of the sac into the peritoneum is prompt removal—even during shock,

for the shock is due to hæmorrhage that increases until the loss is controlled. If, however, the rupture is into the ligament, causing a broad ligament hæmatocele, the case may be watched. Unless the ligament gives way, or extensive extravasation occurs, the case may be left to nature, meeting the indications as they arise.

After the fourth month till the sixth month, if no rupture, the entire sac can usually be removed with but little danger to the mother, and many children may be saved. After sixth month, it is probably best to wait six to ten weeks after death of the child.

The vaginal operation, as once advocated by some, is not justifiable unless the placenta is so situated that it will be incised in abdominal section, or when the foetus presents by one extremity—preferably the cephalic. In vaginal section, do not remove placenta because of the hæmorrhage almost sure to follow; but pack the sac with antiseptic gauze, and await exfoliation. When the septic trouble develops, as it does, use repeated and long-continued irrigation—even for two or three days constantly. Even then nearly all these cases succumb to septicæmia in spite of treatment.

Abdominal section is now the operation in these cases; but always locate the placenta and avoid it in making incision. When placenta is not in the way, incise through the linea alba. Ligate the spermatic, uterine, and other arteries that supply the territory of the placenta, and then remove it, and as much of the sac as possible; or else surround the placental site with cobbler's stitches, thus shutting off blood supply, and then cut away as much of the sac as possible. The usual mode of leaving the placenta and employing drainage, leaves a large septic sac, with decomposing placental mass to slowly poison the victim. Tait's method must soon supersede this now popular method. If the placenta cannot be safely removed, disturb the sac as little as possible, but wash it out and drain all the blood from the placenta, cut the cord short and close the sac hermetically, as Tait does. Keep everything aseptic.

After foetal death and closure of placental sinuses, we can frequently remove the placenta without risk of hæmorrhage; but unless the placenta has entirely or nearly entirely exfoliated, do not attempt its removal, as such cases have resulted fatally four months after foetal death.

The Treatment of Abortion, and Some of the Complications Incident Thereto,

Was the title of a paper by Walter A. Crow, M. D., of Atlanta, Ga., read before the Georgia State Medical Association during the session in Columbus, April 20th. He said that the results of abortion give rise to the necessity of special treatment by the gynæcologist and abdominal surgeon more than any other single cause in the diseases of the human female subject. From the physiological changes of thickening and hypertrophy of the muscular walls of the uterus, as also the changes of the endometrium, as claimed by Johnstone and others, the structure of this organ has been even classified as an adenoid tissue. During gestation, this uterine lymphatic system undergoes hypertrophic and hyperplastic changes in all form-elements—analogueous in kind and degree to those of the blood vessels. It thereby favors the tendency to septic infection in all cases of abortion.

The mildest type of, as well as the most common form of uterine trouble due to abortion, is the arrest of the retrograde involution of the uterus, leading to a condition known as sub-involution. From this, other and more pronounced types of pelvic diseases result—such as pyo-salpinx, abscess of the ovaries, pelvic or general peritonitis, also the marked tendency to recurrent attacks of an inflammatory character, either acute or subacute. Under this heading he mentions metritis, chronic endometritis, or an extension of the trouble, so as to involve the appendages; also the adjacent tissue and viscera. Malposition, especially the backward displacement, is a most common occurrence.

The plan of treatment advised, is as near aseptic as the surrounding circumstances will admit. He first has the patient take a sitz bath with the liberal use of soap, or if this cannot be done, then bathe the parts with a cloth or sponge. This is then followed with a 1:2000 to 5,000 bichloride solution injection in the vagina. He favors plugging the cervix to rapid dilatation, unless there are special indications for immediate delivery. After the foetal contents have been removed, he insists in all cases upon thoroughly satisfying himself as to the exact condition of the interior of the womb, thereby avoiding the possible risk of a retained piece of placenta, or strip of membrane. To do this, he suggests the use of a small wire curette, which with a little practice and observation, will enable any one to form a very accurate idea of the endometrium. After the uterus has been cleared, he again uses the same strength of the

bichloride solution, and follows with the routine treatment that is common in full-term delivery.

In the treatment of the after-troubles, he related three cases illustrative :

CASE I.—Was where a portion of the placenta was retained, and followed some four months after with a profuse hæmorrhage; also a condition of sub-involution, with some tubal trouble. This was treated by curettement and packing the uterus with iodoform gauze; opening the bowels well with salines, so as to relieve the tendency to pelvic engorgement, also a tonic iron mixture.

CASE II.—Was one of sub-involution retroversion; also a pyo-salpinx on the left side. A laparotomy was advised in this case, but objected to; the next best thing was to dilate, and favor drainage. This patient showed marked improvement, but was not cured. She is again pregnant.

CASE III.—Was a case of abortion six years ago; has suffered more or less from uterine trouble since. The patient's condition, when he was called to see her eighteen months ago was chronic endometritis and retroflexion, with a profuse menorrhagia. This condition, complicated with la grippe, rendered her case a very serious one. But after a thorough curetting and prolonged after-treatment of local applications, also the use of oxygen gas and the most favorable surroundings, she was improved very much, but still has a misplaced uterus, slightly enlarged.

The summary of the paper is as follows:

1st. There is a marked tendency to infection in all cases of abortion.

2nd. There is urgent necessity of removing, as far as possible, all sources of infection. This includes clean hands, clean instruments, cleanliness of person and bedding, etc.

3d. The importance of thoroughly satisfying one's self in all cases of the complete removal of all the fœtal membrane and placental tissue was impressed.

4th. The patient should be kept under observation for at least two months, with the most favorable surroundings for complete and perfect involution of the enlarged uterus, building up the general health and keeping the bowels open; if necessary, with salines.

5th. Be urgent in the advice to avoid the possibility of becoming pregnant for at least six months, as sexual connection produces more or less irritation and congestion of the parts, and thereby retards, if not in a measure stops, the condition we most desire to secure in these cases—a normal restoration of the parts.

Surgical Treatment of Diseases of the Uterine Adnexa.

Dr. J. A. Goggans, of Alexander City, Ala., read a paper with this title during the session of the Alabama State Medical Association in Montgomery, April 14th. He thinks that we have arrived at that degree of diagnostic skill at which we could almost invariably determine whether or not an operation is demanded; and it is not absolutely necessary to map out the exact pathological conditions that might be present. The three principal symptoms of gross disease of the uterine adnexa should never be lost sight of. They are, first of all, *recurring attacks of pelvic peritonitis from which the patient rarely recovers entirely.*

Second, *hemorrhage*, which might be profuse and irregular.

Third, *pain*, which was generally most severe in the pelvis.

In spite of all palliative treatment, such patients become worse by pessaries, intra-uterine applications, and the curette. Relief only came after the removal of the uterine adnexa. He gave the clinical histories of cases to illustrate the ideas advanced. All prolapsed and tender ovaries did not require removal, and all cysts in the appendages did not necessarily require abdominal section. He reported cases to illustrate those facts.

He made it a rule to regard all patients who were constantly incapacitated by pain with surgical suspicion; but he would only operate in cases where the surgeon could actually locate the disease by putting his fingers on something which he knew caused serious symptoms. The poor woman who was dependent upon her labor for her sustenance, demanded the removal of the appendages much earlier than the rich.

He tabulated the principal signs which indicated that an operation should be performed, as follows, viz:

1st. Those attending pelvic inflammations, accompanied by tortuous and distended tubes, which might be felt in Douglas' pouch, behind the uterus. That condition might be preceded by the symptoms of an abortion, a gonorrhœa, or a tubal pregnancy.

2nd. The physical signs of prolapsed and tender ovaries due to chronic abscess.

3rd. The physical signs of prolapsed and tender ovaries accompanied by irregular hemorrhages and incapacitating pains.

4th. Some few cases where dysmenorrhœa was the principal symptom, with a probability of its being kept up by chronic disease of the ovaries and tubes.

5th. Where hemorrhage was the principal symptom, accompanied by the ordinary signs of gross pelvic disease.

6th. In a few cases of general peritonitis, preceded by the symptoms of rupture of a pre-existing pelvic abscess, ovarian abscess, pyosalpinx, or abscess in the appendages developed during the progress of puerperal septicæmia.

Such women as he described were already unsexed, and nothing was more disagreeable than sexual intercourse. Consequently, the removal of the appendages in no way changed such patients, except for the better. Their instincts and propensities were the same.

Treatment of Lobar Pneumonia

Was the title of a paper by Dr. Hiram Perdue, of Barnesville, Ga., read before the Georgia State Medical Association, in session in Columbus last month. In the congestive stage, he gives morphia hypodermically to relieve the restlessness of the high fever and the sharp, stabbing pain beneath the nipple of the affected side; also to relieve the nausea and vomiting. Phenacetin (about 5 grains every four hours) better reduces the fever and eases the pain. It is better than quinine. Cold applications should be discarded, because of the too great depression they cause. A counter-irritant or a soothing application should envelope the chest. He generally uses for this purpose a woolen cloth saturated with spirits of turpentine—renewed twice daily. If the patient has not been purged, give him calomel. Trinitrin (gr. 1-100th) is often needed—sometimes at first every twenty to thirty minutes—to dilate the arterioles. Strychnia and atropia—small doses—in combination, are often demanded every four hours or longer to stimulate the heart and respiration. Peroxide of hydrogen (teaspoonful of 15 volume preparation) may be given every hour or less between other medicines, for its germicidal properties, as also for its stimulant effects. With this line of treatment, he is confident he has saved lives—no death in twenty consecutive cases—13 double pneumonia. Treatment in no case extended beyond sixteen days; ages of patients ranged from 16 months to 72 years. Phenacetin was given in all cases, unless the temperature fell below 103°. Chloral hydrate—gr. viij to xij—preceded by whiskey to prevent its depressing effects—is often needed for its tranquillizing and sleep-producing effects. Diet should be nutritious and liquid. Reed & Carnrick's "Kumysgen" was useful, especially when nausea and vomiting threatened. Stimulating expectorants and

tonics are needed during convalescence. In *catarrhal pneumonia*, a stimulating plan of treatment should be adopted from the beginning. He uses carbonate or muriate of ammonia throughout the treatment of such cases. Here, quinine is very valuable. He uses the same kinds of applications to the chest as in lobar pneumonia. Be very careful to avoid relapse.

Effects of Sulfonal.

In the *Journal of Mental Science*, (January, 1892,) Dr. Carlyle Johnstone records his observations on the effects of sulfonal on fifty patients suffering from various kinds of mental disorders, including general paralysis, melancholia, and mania. His experiences with the drug point to the conclusion that, in properly regulated doses, it is an efficient hypnotic, and, compared with that of other hypnotics, its action is fairly certain and constant. The sleep produced by it is natural and undisturbed by dreams; it has no injurious effect upon the appetite, circulation, respiration, or temperature, and the general health does not suffer under its use. After a time, the dose may be reduced, or the medicine may be discontinued, and the patient still continue to sleep well. Dr. Johnstone also found that it had a distinct sedative action in mental excitement and distress, and could be employed with great benefit in cases of insanity, especially such as are of recent or acute character. Its complete tastelessness is also a recommendation in such cases, allowing its combination with food, or in milk, in such a way as to escape the notice of the patient. The chief drawbacks were found to be its slowness of action, and often the persistence of its soporific effect during the succeeding day, together with, at times, confusion, giddiness, and fatigue. After repeated doses, a dreamy confusion was noticeable, and, subsequently, slight weariness and fatigue, followed, in a few cases, by enfeeblement and shakiness of motion, but nothing occurred which could be called an alarming symptom. As a rule, indeed, the mental condition improved, the excitement, irritability, and motor restlessness being diminished, and the wretchedness dispelled. It will thus be seen that the writer's conclusions are in accord with the majority of those already published; and that while regarding sulfonal as by no means a perfect hypnotic, he is inclined to give it a very important place in the treatment of sleeplessness and restlessness generally. The best doses he found to be between thirty and forty grains, and it should be given just before the patient

lies down. The freedom of the drug from taste and smell, as has been said, is one of its advantages, and renders its administration easy.—*Lancet*, Jan. 23, 1892.—[Given in warm or hot water, its soporific action is undoubtedly more quickly produced.—Editor *Virginia Medical Monthly*.]

The Lactate of Strontium in Albuminuria.

Prof. Dujardin-Beaumetz treated (at the Cochin Hospital) five albuminuric patients with lactate of strontium (Paraf-Javal), giving the salt in two-gramme doses only, three times a day, although ten grammes may be given daily. These cases included several of the forms of albuminuria; among them were two cardiac cases and a well-marked case of Bright's disease. In a report to the Paris Academy of Medicine, Dr. Dujardin-Beaumetz said: "In from one to four days I obtained from all of these patients a reduction, to one-half, of the amount of albumen in the urine. Evidently, we now have a precious medicament for this condition, and one which is sure, potent, and inoffensive."

Dr. Constantin Paul, in a report to the Academy, July 28, 1891, said, in reference to the action of the lactate of strontium in Bright's disease: "It is not a diuretic, but it notably diminishes the quantity of albumen while effecting a rapid amelioration of the other symptoms. The number of my cases treated with it is not yet large, but the results are such as to lead me to recommend a trial of this medicament to other physicians." In a report to the *Therapeutic Society* (Nov. 11), M. Paul re-affirms his first conclusions, and adds: "The lactate of strontium (Paraf-Javal) has done excellent service in parenchymatous, rheumatical nephritis; in the nephritis of gouty and scrofulous patients, and in the albuminuria of pregnant or recently delivered women. I have reason to hope for the same excellent results in the albuminuria of scarlatina. *Even the presence of an intense febrile process does not interfere with the action of lactate of strontium in parenchymatous nephritis.*"

Iodine and Camphor Compound.

Dr. R. J. Nunn, Savannah, Ga., during the session of the Georgia State Medical Association, Columbus, April, 1892, stated that iodine, when mixed with camphor, forms a compound which is very soluble in alcohol, the ethers, chloroform, the petroleums, oils, soluble in glycerin, and slightly so in water. Apparently, this compound retains all the properties which render iodine valuable as a therapeutic agent, except its causticity.

Book Notices.

A Practical Manual of Diseases of the Skin. By GEORGE H. ROHÉ, M. D., Professor of Materia Medica, Therapeutics, and Hygiene, and formerly Professor of Dermatology, College of Physicians and Surgeons, Baltimore, etc. Assisted by J. WILLIAMS LORD, A. B., M. D., Lecturer on Dermatology and Bandaging, College of Physicians and Surgeons; Assistant Physician to Skin Department Dispensary of Johns Hopkins Hospital. *No. 13 in the Physicians' and Students' Ready-Reference Series.* In one neat 12mo volume, 303 pages. Extra Cloth, price, \$1.25, net. Philadelphia. The F. A. Davis Co., Publishers.

This is a *practical* manual—not a theoretical work. Its accuracy in description of the various skin diseases is imperfect only in so far as even the best selected words cannot make a perfect picture of that which the eye alone can appreciate. In therapeutic suggestion or recommendation, the authors have been guided by their own clinical experience where that was satisfactory; while in all mooted points, the prescriptions of the best dermatological practitioners are given. The purpose of the work is more specially to serve the needs of the general practitioner and student—not the specialist.

The Mediterranean Shores of America; or, The Climatic, Physical, and Meteorological Conditions of Southern California. By P. C. REMONDINO, M. D., Member American Public Health Association, and of State Board of Health of California; Vice-President California State Medical Society, and of Southern California Medical Society. Illustrated with Forty-five Engravings and two double-page Maps. In one handsome, Royal Octavo volume, 176 pages. Extra Cloth, price, \$1.25, net; Paper, 75 cents, net. Philadelphia. The F. A. Davis Co., Publishers.

This book reads like a “book of travels” written by one familiar with pen, who has seen much, and records but a portion of what he knows. The special value of the work is the precise details given as to climate, etc., of different parts of Southern California. No invalid in search of climatic treatment should be without this wonderful record of what exists and what does not exist in the section of California under consideration. Many physicians talk too much about climatic treatment, and know too little about what they advise or abuse. This book is both pleasant reading and gives valuable instruction which is of frequent service in any general practice.

Year-Book of Treatment for 1892. A Critical Review for Practitioners of Medicine and Surgery. By TWENTY-ONE ENGLISH CONTRIBUTORS. Philadelphia. Lea Brothers & Co. 1892. Large 12mo. Pp. 486. Cloth. (From Publishers).

This "Year Book" records advances published in many of the journals of the world. But "it is English, you know," and hence a great deal that was done by Americans is not noticed, while the contributions to practical medicine and surgery by Southern practitioners are, as usual, ignored. Still, what is recorded, is well recorded, and the practitioner who neglects his opportunity to learn from this book what was done in the way of advance during 1891, keeps himself behind the times. The book is divided in twenty-one sections, with a compiler for each division. An excellent index points the reader to the division in which he may be seeking new light. Over forty pages are given each to diseases of the nervous system, to diseases of the stomach, intestines, liver, etc., to general surgery, etc., while other subjects take up from ten to forty pages. It is an essential work to the busy practitioner.

Pocket Pharmacy, with Therapeutic Index. By JOHN AULDE, M. D., Member American Medical Association, etc. New York. D. Appleton & Co. 1892. 12mo. Pp. 204. Cloth, \$2. (For sale by West, Johnston & Co., Richmond).

This is, as the title page states, "a resumé of the clinical applications of remedies adapted to the pocket case for the treatment of emergencies and acute diseases." The contents of the pocket case are enumerated to be preparations in tablet or triturate form of acetanilide, aconite, arsenic, atropine, bryonia, calcium sulphide, calomel, camphor, cannabis, indica, copper arsenite, gelsemium, ipecac, mercury biniodide, morphia, quinia, rhus toxicodendron, strophanthus, strychnia, trinitrin, and zinc sulphocarbolate. Under the name of each drug, its therapeutic uses are stated, and the total number of diseases or ailments named in the index for which the medicines referred to are useful is about 300. Such a selection of preparations for an emergency case is very serviceable; but each practitioner is apt to adopt a list of remedies requiring a larger case. A useful emergency case made by Parke, Davis & Co., was described by Dr. McLain, of Washington, in our January number, which possessed the advantage of more antidotes, etc., for cases of poisoning, etc.

Principles and Practice of Medicine. By WILLIAM OSLER, M. D., F.R.C.P., Lond. Professor of Medicine in Johns Hopkins University, and Physician-in-Chief to Johns Hopkins Hospital, Baltimore, etc. New York. D. Appleton & Co. 1892. Large 8vo. Pp. xvi—1079. (From Publishers).

This magnificent work on Practice, designed for the use of practitioners and students of medicine, opens without preface other than a note of thanks to the helpers of the author. The reader is struck with the terseness of description, etc., and at the same time with the very great variety of subjects well discussed. The etiology, symptoms and treatment, are the most prominent subdivisions of sections treating of special diseases. Specific infectious diseases occupy 270 pages; 150 pages are given to diseases of the digestive system; about 105 each, to diseases of the respiratory, and the circulatory systems; about 220 to diseases of the nervous system, etc. In commending this as a text-book, we feel that we are calling attention of practitioners to a work on which they may rely, and the professor and student may well adopt it as a systematic, practical guide in the pursuit of their medical course of instruction.

Bacteriological Diagnosis: Tabular Aids for Use in Practical Work. By JAMES EISENBERG, Ph. D., M. D., Vienna *Translated and Augmented, with the permission of the Author, from the Second German Edition, by* NORVAL H. PIERCE, M. D., Assistant to Surgical Clinic, College of Physicians and Surgeons, Chicago, Ill., etc. Philadelphia and London. F. A. Davis Co., Publishers. 1892. Large 8vo. Pp. 184. Cloth. \$1.50, net. (From Publishers).

This is not a reading book, but a tabular statement of the specific differences of bacteria arranged for ready reference, aided by a copious index. One hundred and thirty-eight micro-organisms are considered—including pathogenic and non-pathogenic bacteria and fungi. Besides its value to the practitioner who pursues the study of the culture of bacteria, the book is especially useful to the laboratory student, who may adopt it as a guide book as to how to proceed in the culture of micro-organisms. It is an excellent text-book also. The appendix gives the "bacteriological technique used in the cultivation and staining of bacteria;" the formulæ for the preparation of stains and re-agents; the microscopic examination of bacteria; the detection of bacteria in tissue, etc.

Manual of Operative Surgery. By FREDERICK TREVES, F. R. C. S., Surgeon to, and Lecturer on Anatomy at the London Hospital, etc. With 422 Illustrations. *In Two Volumes.* Philadelphia: Lea Brothers & Co. 1892. 8vo. Pp. 775 each volume. Cloth, \$9; leather, \$11.

Mr. Treves is the author of several well-known surgical works, and the influence of his authority on all such subjects is recognized the world over. But through none of his publications is it probable that he has done as much good to the profession as we predict the present *Manual* will do. It will be a present help in time of need even to the practised surgeon; while to him who has to practice surgery at times because of his surroundings it will be the very book he would wish to have for instruction as to the details of operation. It does not deal materially with points of diagnosis, or general points of pathology, etc.; for its purpose is to tell what to do after these questions have been decided, and how to do it—even to the minutest detail. Instead of being a compilation of descriptions of all the operations recommended by the various devices to accomplish certain ends, the author is to be congratulated because of having made the selection for the practitioner as to which operation to choose—his selection for the most part being based on experience with many methods. So that, whether he be an old or a young practitioner, this is the book he should have for frequent reference and constant guidance.

Practical Midwifery—A Hand-Book of Treatment By EDWARD REYNOLDS, M. D., Fellow of American Gynæcological Society of Boston, etc.; Assistant in Obstetrics in Harvard University; Physician to Out-Patients of Boston Lying in Hospital, etc. With 121 Illustrations. New York. William Wood & Co. 1892. 8vo. 424 pages. Red Parchment Muslin, \$2 50.

If asked to advise the best practical work for beginners in obstetrics, we would suggest the one under notice. Too often is the young doctor confused by the multiplicity of advice after reading the more pretentious “systems of obstetrics.” This hand-book, however, attempts to teach one well-tested plan of procedure thoroughly. Undoubtedly this is best for the new practitioner—allowing him to branch out into other practices after he becomes familiar with one. As to style, the author loses nothing in verbiage—he writes plainly to the point, and illustrates procedures that words cannot well describe by wood cuts, etc. The publishers have done their work nicely. The price is very moderate for such a book.

Pathology and Prevention of Influenza. By JULIUS ALTHAUS, M. D., M. R. C. P., Lond. New York. G. P. Putnam's Sons. 1892. Cloth. 12mo. Pp. 64. Price 75 cents. (For sale by West, Johnston & Co., Richmond)

The ingenious theory of the author that influenza is preventable by vaccination, does not appear tenable from recent experiences in this section. The vaccinated and the unvaccinated alike had the disease. As the object of the book is to insist upon vaccination as a preventive, should another epidemic threaten, and as personal experience and extended observation show that vaccination had no protective influence against the grip, it is idle to discuss the merits or demerits of this well-written and most entertaining theoretic essay.

Surgical Diseases of the Ovaries and Fallopian Tubes, including Tubal Pregnancy. By J. BLAND SUTTON, F. R. C. S., Assistant Surgeon to Middlesex Hospital, etc. With 119 Engravings and 5 Colored Plates. Philadelphia: Lea Brothers & Co. Cloth. 12mo. Pp. 500.

The author is quite a close follower of Mr. Lawson Tait, in his doctrines and practice. He, however, quotes many authorities, and thus attempts to give an impartial presentation of the surgical side of pelvic female diseases. Yet it seems a little singular that, in such a work as this, in the index to the names of authors quoted, we do not find such names as Battey, Sims, Thomas, etc. The illustrations seem to be true to nature—all but sixteen of the engravings being original. The procedures advised in given cases are in keeping with the teachings of the advanced operators of today. In fact, this is a valuable surgical work, and will help the gynæcologist who may use the work as a consultation book.

First Lines in Midwifery By G. ERNEST HERMAN, M. B., Lond., F. R. C. P., Obstetric Physician to London Hospital, etc. With 80 Illustrations. Philadelphia: Lea Brothers & Co. Cloth. 16mo. Pp. 191.

This guide to attendance on natural labor for medical students and midwives is a very excellent elementary book. The profusion of illustrations give a desirable help to the beginner. Such a book is often worth while to look into before going to a case of labor, in order to refresh memory.

Consumption: How to Prevent It, and How to Live with It.

By N. S. DAVIS, JR., A. M., M. D., Professor of Principles and Practice of Medicine, Chicago Medical College, etc. Philadelphia: F. A. Davis. 1891. 12mo. Pp. 143. Cloth. Price, 75 cents—net. (From Pub-

To the consumptive, any authoritative reading relating to his condition is interesting reading, and much sought after. This book supplies the want as well as any; for it dwells largely on the mode of life, climate, exercise, food, clothing, etc., necessary for the cure (?) of the disease. Unfortunately, the author prepared the MS. before the announcement of Koch's treatment, and does not refer to the subject in the text. For the same reason, we suppose, he does not refer to the now popular Consumptive health resort, Southern Pines, N. C., from which place most encouraging reports are coming in.

Principles of Bacteriology. By A. C. ABBOTT, M. D. First Assistant, Laboratory of Hygiene, University of Pennsylvania, etc. With Illustrations. Philadelphia. Lea Brothers & Co. 1892. 12mo.

Of course the doctrine of "all life from life," is the elementary one of this work, which it is presumed overthrows the doctrine of spontaneous generation. As a guide book for those beginning the study of bacteriology, this is well-suited to their wants. It does not reach up to the subject of ptomaines, nor to some other subjects related to bacteriological investigation. But the details essential for the beginner are well described and illustrated.

Dictionary of Treatment; or Therapeutic Index, including Medical and Surgical Therapeutics. By WILLIAM WHITLA, M. D., Professor of Materia Medica and Therapeutics in Queen's College, Belfast, etc. *Revised and Adapted to the Pharmacopæia of the United States.* Philadelphia: Lea Brothers & Co. 1892. Cloth. Svo. Pp. 921.

Such a work as this should be handy in every practitioner's office. Time and again will he feel in need of such a book—to tell him what is the best thing to do as he is called to a case. Of the several Therapeutic dictionaries in our library, by comparison, we find this one very decidedly the best. It is well up to the times as to the classes of remedies mentioned, and possesses the benefit to the prescriber of advising him which is the best agent of those suggested for a given disease. While the book is arranged alphabetically as to diseases, a well-prepared general index makes reference

to a given affection easy. The author has been as concise as possible in each department.

Treatise on Bright's Disease of the Kidneys. *Its Pathology, Diagnosis, and Treatment. With Chapters on the Anatomy of the Kidneys, Albuminuria, and the Urinary Secretion.* By HENRY B. MILLARD, M. A., M. D., Fellow of the American Academy of Medicine, etc. *With Numerous Original Illustrations. Third Edition. Revised and Enlarged.* New York: Wm. Wood & Co. 1892. Cloth. 8vo. Pp. xviii—322.

The author has presented in this a most valuable work for the practitioner. As compared with former editions, we find some important changes. For instance, he entirely renounces his belief in the so-called normal or physiological albuminuria, asserting now that "thus far, albuminuria has not been shown to exist physiologically." An important addition consists in the introduction of the author's phenic acetic acid and potash test for albumen in the urine. The alterations, additions, etc., are such, however, as greatly improve what has long been a serviceable book. Therapeutically, the soundest advice is given in each of the Sections. No practitioner can well afford to do without this practical treatise on albuminuric diseases.

Manual of Diseases of the Nervous System. By W. R. GOWERS, M. D., F. R. C. P., F. R. S., Physician to the National Hospital for the Paralyzed and Epileptic, etc. Second Edition. *Revised and Enlarged.* Vol. I. *Diseases of the Nerves and Spinal Cord.* With 180 Illustrations, including 370 Figures. Philadelphia: P. Blakiston, Son & Co. 1892. Cloth. 8vo. Pp. 616. Price, \$3.50. (From Publishers.)

This is the current standard English text-book on nervous diseases. It is copiously illustrated with cuts and diagrams. The author writes with remarkable clearness, giving readable interest to the important descriptions of diseases, etc. Part III of Volume I, devoted to the anatomy and functions of the spinal cord, diseases of the cord and anatomical diagnosis of spinal diseases, is about the best help the general practitioner can get in so limited a space. In fact, it would be difficult to find a point for adverse criticism, according to the present status of neurology. The therapeutic suggestions, too, are about the best that experience and study could have developed. Vol. II, soon to be issued, will deal with diseases of the brain and general diseases of the nervous system, and will complete a most valuable treatise for the general practitioner.

Editorial.

Medical Examining Board of Virginia.

In the early part of March there appeared in one of our daily papers an exaggerated and self-laudatory advertisement of a noted quack, hailing from a distant State, who therein professed to work the usual miracles of this class of migratory healers. Information was given to the Commonwealth's Attorney of Richmond, by the three resident members of the Medical Examining Board of Virginia, and also by Dr. Wm. W. Parker of this city, ex-President of the Medical Society of Virginia; whereupon that officer promptly ordered the arrest of the offender, who not only had not passed an examination before the Board, as required by law, regulating the practice of medicine and surgery in this State, but was proceeding to practice at one of the hotels of the city without so much as asking about the payment of his license tax.

When the case came up for trial, the counsel for the prisoner attacked the statute upon the ground that there was no specific provision made for the registration of the certificate of the Board of Medical Examiners when issued to transient non-residents, and that therefore the prisoner was required by the law to perform an impossibility, namely, to register a certificate for which registration no provision had been made by the law. This point was sustained by the court, although the able arguments of the Attorney for the Commonwealth, Mr. H. M. Smith, were powerfully supported by those of Messrs. Frank H. McGuire, of Richmond, Va., R. G. Pegram, of the same city, and Maj. Robt. T. Barton, of Winchester, Va. These gentlemen handsomely sustained their reputation so well known throughout the State, and even beyond her borders.

The prisoner, however, was not permitted to practice until he had paid a fine of \$30, and the usual amount for his license-tax.

The court did not pass upon other points of the law, but took the ground that it is *defective* in this particular, and is, therefore, not applicable to transient practitioners, though unfortunately there was no definition given as to what constitutes a transient practitioner.

His Honor, Judge Witt, gave it as his opinion, when not sitting, that the law is constitutional.

The Board now finds that some of the ablest legal talent

of the State has taken the opposite view of the case; among them are three ex-judges of the Court of Appeals of Virginia.

As a matter of course, the decision of Judge Witt applies only to the jurisdiction of the Hustings Court of the city of Richmond, and has no effect beyond the corporate limits of Richmond city, and is not final as to that limited sphere as the Court of Appeals, will, we doubt not, reverse the ruling of the minor court. No attempt was made to prove the law unconstitutional; the constitutionality of such laws is a matter of law history, known to nearly every tyro in law. The highest State and United States Courts have again and again decided that such State laws (those regulating the practice of medicine), partake of the character of police and sanitary regulations, and that a Legislature has the right to pass such laws for the protection of its citizens, even though such laws discriminate between citizens of the various States. Judge Witt's decision does not involve a constitutional question, but is based upon a supposed defect in the wording of the law.

The law provides that the certificate of the Board must be recorded with the Clerk of the County or Corporation Court nearest which he resides; and in the case of non-residents living within ten miles of the border lines of the State, whose practice extends into this State, they must also record their certificate obtained from the Virginia State Board in the nearest County or Corporation Court in this State. But according to Judge Witt's ruling, as the law does not designate in so many words that a non-resident, living more than ten miles from the State's borders, shall likewise record his certificate obtained from the Board in the nearest County or Corporation Court, the Judge concludes that the Legislature did not intend non-residents beyond the ten mile limit, to obtain a certificate and record it as provided for residents and non-residents living within ten miles.

Some of the ablest Constitutional Attorneys in the State affirm that Judge Witt has wholly misconstrued the spirit and letter of the law, and utterly fails to carry out the intent of the Legislature, as expressed and implied in the statute now regulating the practice of medicine and surgery in Virginia. The law declares that it shall be the duty of the Board to examine "*all persons who shall desire to commence the practice of medicine and surgery in this State.*" It was clearly the intent of the Legislature that the non-

resident, temporarily in this State to practice, should obtain the permit of the Board, and record it wherever in this State he practiced; and more than that, it was clearly the intent of the Legislature that a non-resident who could not obtain the permit of the Board, should not practice at all in this State. The discrimination is between men who can, and those who cannot stand a satisfactory examination.

The one important mission of the Board is to protect the people of this State from incompetent practitioners—be they quacks or members of the regular profession; and how the Judge could fail to see the implied and expressed intent of the Legislature in the statute now regulating the practice of medicine and surgery in Virginia, we are at a loss to understand.

If, however, there is a defect in the letter of the law, which we do not admit, then the profession and people of this State must see to it that the Legislature at the earliest possible moment corrects the defect. We cannot afford to have even so small a part of the State as the jurisdiction of the Hustings Court of Richmond city made the dumping ground for the medical offal from other States. The direct effect of Judge Witt's decision is to discriminate distinctly against citizens of this State; for the incompetent and ignorant quack may go "scot free" in the city of Richmond, "*until he shall declare his intention to become a resident of this State,*" forsooth! while the citizens of Virginia are obliged by the law to go before the Board and obtain its certificate before they can be licensed to practice.

It is earnestly hoped that the profession all over the State will not be deterred, by reason of the decision of Judge Witt, from instituting legal proceedings against all persons who may attempt to practise medicine and surgery without having complied with the law upon this subject, as it is an important matter to establish precedents in each county or corporation court.

The individual of unsavory reputation—the quack—is an old offender, and was expelled from the State of Illinois in 1884 by the State Board of Health for practising without complying with the requirements of the law. Is it not suggestive that a man who professes to perform such wonders, and to "want only those who cannot be cured by other physicians," will never attempt to comply with Medical Examining laws in the various States? For the details of this case (the Illinois Board's), we refer our readers to the Report of the Board of Health of the State of Illinois, 1884.

It is most important, in our judgment, that the profession throughout the State lose no opportunity of moulding public sentiment on this subject, and to instruct their representatives and senators.

In order to show the great importance of this last suggestion, we will mention the difficulty experienced by the members of the Board in this city during the last session of the Legislature in forestalling a cancer quack who sought to establish himself in Prince William county—after his conviction in that county—by a petition to the General Assembly, signed by many excellent, but misguided citizens, of both sexes and colors, for special legislation to enable him to practise, *without complying with the requirements of the law!* The representative of the county made two determined efforts to get the Committee to recommend to the House the passage of such an act, and it was not without a great deal of labor and interviewing numerous friends in both branches of the General Assembly that they finally succeeded in carrying the Committee.

A few days later, another petition came up, of a similar character, before another House Committee, and the same fight had to be made before it. The Board is to be congratulated upon having thus “nipped in the bud” these two cases, as it will save much trouble and time in the future; for had these charlatans succeeded in getting the legislation they sought, it would have opened the doors to numberless appeals of like character, and the labors of the Board would have been greatly increased.

Both these men are ignorant, and neither one has even a rudiment of medical education; and yet it is almost certain that their petitions would have been favorably reported by the Committees had not the facts of the cases been correctly presented by the Board to the Legislature. It is important to make the people understand that all legislation sustaining the Board is for *their* protection far more than for that of the profession.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics.

Messrs. P. Blakiston, Son & Co., of Philadelphia, announce for early issue, in one complete handy volume, an American copyright edition of an important new text-book, with this title, by Wm. Hale White, M. D., F. R. C. P., Physician to, and Lecturer on Materia Medica, at Guy's Hospital, etc., edited by Reynold W. Wilcox, M. A., M. D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital.

Reduction in Salaries of Officers of Southwestern [Va.], Lunatic Asylum.

The Board of Trustees of the Southwestern Asylum, at Marion, Va., at their meeting on April 15th, decided that as the Legislature had made no provision for the support of the Institution, it was necessary to reduce the salaries of all the officers 20 per cent. As Dr. Brady refused to accept the reduction, it was decided to abolish the office of Second Assistant Physician after June 1st, and all other officers were retained with the reduction of 20 per cent. The Board regretted that the niggardly appropriations, and lack of foresight of the Legislature, forced this action upon them. They were anxious to retain all the officers, but felt they could not do so without reducing salaries, and as Dr. Brady positively refused to accept any reduction, they regretfully abolished his position, and passed the following resolutions:

"Resolved by the Board, that in abolishing the office of Second Assistant Physician, which has been filled by Dr. Elliott T. Brady, the action of the Board has been taken alone; because the funds of the Asylum will not allow the continuance of the office of Second Assistant Physician.

"Resolved further, That the Board expresses its full confidence in Dr. Brady as an able physician; and the manner in which he has discharged the duties of the position which he has filled in this Institution, makes the Board deeply regret the necessity of losing his valuable services. The Board recommends Dr. Brady to the confidence of the public as an able physician, and a high-toned, and honorable gentleman.

"Resolved, That the Clerk of the Board present to Dr. Brady a copy of these resolutions."

The changes in salaries are as follows:

	Formerly.	Now.
Superintendent,	25,00	2,000
First Assistant Physician,	1,500	1,200
Second " "	1,500	abolished.
Steward,	1,500	1,200
Clerk and Storekeeper,	1,000	800
Matron,	500	400
	<hr/>	<hr/>
	\$8,500	\$5,600

The Executive Committee of the Board of Trustees, consisting of five members, who meet monthly to audit accounts, etc., formerly received \$100 each per annum; this is also abolished; so the total saving will be \$3,400, which it is hoped will prevent a deficit.

Priority of Supra-Pubic Cystotomy for Prostatic Troubles.

We notice in *L'Union Medicale* (Paris), of April 9th, a claim of priority by Prof. Poncet, of Lyons, France, of devising supra-pubic cystotomy for chronic prostatic troubles. He claims to have done the operation in 1889; whereas Dr. Hunter McGuire, of Richmond, Va., U. S. A., did the operation for the purpose indicated in November, 1887; and again (on another patient) in 1888. Since then he has done the operation for chronic prostatic troubles many times. The first two cases were published in the *Transactions of the American Surgical Association*, Vol. VI, 1888. As Dr. McGuire has so generally been accorded the credit of originating this operation for the purposes named, and as so many publications and republications have been made making due acknowledgments to this distinguished surgeon, it sounds queer that at this date priority of claim should be raised for Prof. Poncet in 1889.

Dr. Paulus A. Irving,

Who has been so valuable a member of the Medical Examining Board of Virginia, and whose ability as a practitioner in and about Farmville, Va., was well established, has removed to Richmond, Va., to continue practice. He is most cordially welcomed on every hand. His removal from Farmville caused him to resign his membership in the Board of Medical Examiners, of which he was the most excellent Secretary. His successor as Secretary is Dr. Jacob Michaux, of Richmond, Va.

The Medical Society of the State of North Carolina

Will meet in Wilmington May 17th, 18th and 19th. The program shows that the session will be of special interest. Dr. Wm. T. Cheatham, of Henderson, President; Dr. J. M. Hays, now of Washington, D. C., Secretary. *The Board of Medical Examiners* will meet in Wilmington May 16th, and remain in session until all applicants are examined. Dr. L. J. Picot, of Littleton, N. C., Secretary.

Officers of Tennessee State Medical Society.

During the interesting session of this State Society, held in Knoxville April 12th and 13th, the following officers were elected for the ensuing term: Dr. C. W. Beaumont, of Clarksville, President; Drs. A. D. Scruggs, of ———, W. K. Sheddan, of Williamsport, and W. A. D. Coop, of Dyersburg, Vice-Presidents respectively for East, Middle and West Tennessee; Dr. D. S. Nelson, of Chattanooga, Secretary, and Dr. Walker, of ———, Treasurer.

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Original Communications.

ART. I.—Removal of the Uterine Appendages for Epilepsy.

By JOSEPH PRICE, M. D., of Philadelphia, Pa.

THE PRESTON RETREAT, PHILA.

In my own work I have operated thirty-two times with varying degrees of success. The condition of the patient, her history, the length of time the seizures have been noticed, all form an essential part of any consideration of her case. In operating in this, as in other conditions, it is first necessary to determine how far the disease is inherited, how far it is acquired, or has grown upon the patient.

Epilepsy, whether it is hysterical or not, when it is in no wise connected with the menstrual function, should not be considered in the light of a disease, remediable by interference with this function. I take it that in all surgical affections, the extent, nature, and degree of disease should be appreciated before operation is undertaken, unless we start out with the intention of doing an exploratory to determine and settle the diagnosis. The hysterical element of epilepsy, all in all, I think it is generally acknowledged, gives us more hope of remedying the disease.

Now, since this is true, it is necessary to look carefully into the history of the case to decide whether it has been a

pre-existing epilepsy, on which the hysterical element has been grafted, or whether the disease has been hysterical from its incipency. If the hysteria is simply an increment of the disease, what are the nervous impulses due to from which it is derived? If then the disease seemingly arises from a disturbance of the nervous co-ordination powers at the initiation of menstruation, he shall carefully consider all sides of the disease, and ascertain how far the attack is simply one of irritation, and how far of disease. If one of irritation, this may often be relieved without absolute removal. For instance, if stenosis causes the irritation, relief of this system is sufficient to restore the equilibrium of nervous co-ordination. So, again, if there is dysmenorrhœa, or menorrhagia, existing simply as such without definite lesion, treatment of these conditions symptomatically, must first be the effort of legitimate gynæcology.

In the event that these resources fail, there is a far wider question to consider. We must look for the absolute relation of the menstrual function as such, apart from everything else, in the causation of the disease. If, at the beginning of menstruation, there has been an on-coming of the hysterio-epileptic attacks, and this has continued, or grown worse, as time has progressed, so that there is really, as well as inferentially, a connection between the function and the attacks, then it must be considered whether in the absence of the function, or during its intervals, there is immunity from the nervous symptoms, or cessation in part, or reduction in their severity. If there is found any one of these favoring circumstances, operation may be considered. And in looking toward an operation, examination must be made to determine either the presence of actual disease, or to determine whether the ovarian region is an epileptic zone—that is, whether manipulation, pressure, or impacts over the ovarian region produce epileptic seizures. In this condition, if there is actual disease, I would insist upon a removal of the parts as giving the patient a possible chance to regain her mental and normal nervous integrity. We must consider that in these cases we have a gradual, sometimes

rapid, degeneration of the powers, and that the medical treatment most frequently results in a mental or moral hebetude that is well-nigh sickening.

From this standpoint, the consideration of sex is of no import whatever, and hence the cry of unsexing as barbarous, can only be uttered by the unthinking. It were far better if all epileptics were asexual, and I believe it would also be far better if all cases within a certain degree could be rendered so. No one of us with an epileptic in our family or acquaintance or clientele, can help feeling that all in all, the patient would be better were he out of his suffering, and we all shudder at the thought of the procreation of such as he.

But it is unnecessary to pursue this phase farther; it comes under the head of ethical philosophy—not surgery; and the time is not yet ripe for so wide an application of the laws of self-defence. In single women, when the epileptic spasm is worse during menstruation, more frequent, and having longer duration of the seizures, it is important to notice whether this state of affairs is uniform, whether it depends upon the function or upon accidental causes. If the exacerbation occurs only at the time of the catamenia, if during the intervals there is absolute rest from them, then it should be considered that operation is justifiable as a remedy for an absolutely causal relation between the function and the disease. This is true, I take it, both in the presence and absence of pathological conditions. We repeat, all pathological conditions causing derangement or irritation of the menstrual function should be remedied by whatever surgical procedures are necessary for the abatement, mechanical or functional, of the complaint; and if there are no such mechanical conditions existing, the nervous symptomatology itself must be taken under consideration.

Now, in married women, we have still another condition to aid us, or at least to consider. Pregnancy may be looked at either in a curative or a causal relation. If a woman is seized with epileptic spasms at no time except during pregnancy, it requires little reasoning to connect pregnancy with

the seizures, and steps taken to avoid it. If, on the other hand, a confirmed epileptic is free from her spasms during her pregnancy, if these are also held in abeyance during lactation, and if they again recur when lactation is over and menstruation has returned, we are justified in considering the ovarian influence as causal in reflecting upon the treatment of the disease. These cases, I think, well define the limit of operation for a condition whose origin is often so obscure. Outside of well-marked intimate relation between the disease and the pathological condition of the ovaries and tubes, I think it is the better practice to abstain from surgical interference. This I urge in the interests of surgery, for in all that belongs to abdominal surgery is there not enough to complicate it and cumber it without adding to it anything that cannot be held to belong to it, and failing in which, will make its position a questionable one to many who are still too ready to criticize it? The study of the surgical results of cases operated upon must really go far to determine the question of justifiability, and until statistics are more exact and numerous, the question must be held *sub judice*. Granting that the operation is justifiable, if the results are not satisfactory, there is little comfort in doing work without hope of accomplishing the intention of the operation.

We have, however, the surgery of epilepsy outside of gynæcology to encourage us in many directions; and when we consider that as compared with medicine, the surgical treatment has been much the more brilliant and satisfactory, encouragement should be taken in the line of gynæcology. In the male, circumcision often is a cure for otherwise uncontrollable disease, and the same has been found in the treatment by excision of neuromata, scars, both of the brain and other localities. It is true that the cure of epilepsy from brain injuries has not been as permanent as is desired, but theoretically, it has been efficient to relieve the attack until sufficient time has again elapsed for the reproduction of scar tissue.

The other conditions in general surgery might be referred

to, but they are so well known that sufficient has been given to justify the analogical removal of the uterine appendages in the disease under consideration, and under the limitations prescribed.

ART. II.—Sexual Vices—Their Relation to Insanity—Causative or Consequent.*

By RO. J. PRESTON, A. M., M. D., of Marion, Va.

SUPERINTENDENT SOUTHWESTERN [VA.] LUNATIC ASYLUM, ETC.

It has been well said that "very often a paper of no great importance is the wedge needed to open and develop a discussion of the greatest value." This is my excuse, or rather my purpose, in presenting this short and imperfectly prepared paper before this learned Association, hoping thereby to elicit such a discussion, and to call forth valuable experience and knowledge, both for my own advantage in the treatment of cases, and for the benefit of suffering humanity.

The subject assigned me in the programme embraces a wider field than was contemplated in the preparation of this paper, and more than can be even touched upon in the time I have allotted myself.

Sexual vices have been variously considered under the heads of sexual excesses, prostitution, libertinism, masturbation, sodomy, onanism (solitary and conjugal), salacity, pederasty, satyriasis, etc., but it is my purpose to limit this paper chiefly to the consideration of *Masturbation and its Effects, especially its Relations to Insanity.*†

"Masturbation is, in the majority of cases, an educated vice." How often does this debasing practice go on un-

* Read before the American Medico-Psychological Association, at Washington City, May 6, 1892.

†As said by a distinguished writer, "The use of a distinct scientific phraseology, without redundant sensationalism, in the discussion of this subject, is more or less difficult; yet the matter is of so much interest, involving so many lateral considerations, and has been so insufficiently written about, that it is worthy the attention of every one."

checked, or, like other vicious habits, lead its victim on unconsciously, until it becomes an uncontrollable habit, and the most deplorable consequences ensue? What asylum is there in our land that does not contain many of these sad and pitiable wrecks of former manhood and womanhood—slowly, and often unconsciously, brought from their high estate to the depths of physical, mental and moral degradation and ruin?

It is this class which comes to all our asylums—too often in a hopeless and incurable condition—that has excited my earnest sympathy and interest, and has stimulated me to ask of this Association “What can be done in their behalf?”

It is true that, as just said, it is for the most part, the hopeless cases that come under the care of this specialty—those cases, mostly, in which the sad consequences of misguided youth in this particular are thrown back upon the central nervous system, resulting in or bringing about serious mental disorders.

While it is only such cases which properly come under consideration and discussion here, it may not be amiss to take a more general view of this trouble, and consider, to a limited extent, its disastrous effects upon the entire physical economy. We would fain, also, if possible, through this Association, sound an additional note of warning to wayward youth, to parents, and to the general practitioner, under whose care and to whose skill these cases are first directed, in order thereby, to bring about a more thorough instruction of youth as to these dangers, and, if possible, prevent many of these disastrous results before they become irremediable.

I have taken the liberty in this paper of quoting freely from medical authors (general and special), and take this opportunity of making due acknowledgments for the same.

The following condensed clinical picture, taken from Gross' excellent work on *Surgery*, presents the salient features of such cases often met with by physicians, and easily recognizable, at sight often, by an experienced clinician:

“Masturbation, once established, is liable to be followed

by the most serious consequences, both as it respects the health and happiness of the individual.

"Among earlier symptoms are derangement of the digestive organs, attended with constipation of the bowels, occasional headache, and nervous tremors. At a more advanced period, the patient is harassed with palpitation and dizziness; his sleep is disturbed at night; his extremities are cold and clammy; his body exhales a peculiar seminal odor; he shuns society, and is a prey to gloom and despondency. Impotence, more or less complete, is one of the most common effects of this disorder, if at all protracted.

"When the disease is fully established, the gait is unsteady, the memory is impaired, there is no aptitude for business, and the patient is unable to look one in the face (his actions being those of a poltroon). In a word, he is mentally and physically emasculated. Epilepsy and insanity are occasional consequences of this vile practice"

The distinguished alienist, Dr. Spitzka, says:

"Many of the symptoms presented by the inveterate masturbator are probably due to cerebral anæmia. There are, however, in his case, and in that of the early libertine, certain vaso-motor complications frequently present, which render the clinical picture a mixed one."

"Abuse of the sexual apparatus has a direct exhausting effect (probably dynamic or impalpable) on the nervous apparatus."

Dr. Folsom says:

"Masturbation acts as an exciting cause of insanity, chiefly by creating a morbid psychical state, and by exalting the sensibility of the nervous system, but probably not often even with the young. Injuries to the brain and nervous system are usually slow in their operation, unlike the severe mental shock, which is at once followed by insanity."

Masturbation, in children of both sexes, as shown by Dr. A. Jacobi and others, frequently plays an important part in the production of various neuroses.

Dr. Hamilton says:

"Masturbation is a popular etiological factor (in epilepsy), but I really do not believe, even in face of the numerous alleged cases that have been recorded, that the habit of self-abuse often results in genuine epilepsy. In rare examples, the frequently-repeated act may give rise to a form of the nature of *petit mal*."

From Blandford on *Insanity*, we quote:

"Various disorders, known as nymphomania, satyriasis, hysterical mania, and the like, point to a connection between insanity and the sexual organs. This needs no demonstration; every-day experience shows it, but shows that these organs are affected from the head downwards quite as often as the reverse."

"Insanity accompanied by masturbation is a different thing from insanity caused thereby—different in its oncoming, different in its course and character, and rendering different the prognosis to be made concerning it.

"Insanity caused by masturbation is, generally speaking, gradual in its approach, not attended with any sudden or acute symptoms, but manifested in unpleasant conceit and exalted self-feeling, with delusions in accordance; this gradually increases. Nor is there any hope of cure, for the brain seems to have undergone permanent damage from the constant irritation to which it has been exposed by the practice of the habit. Such a state of things altogether differs from the violent, but often transient outbursts of hysterical or nymphomaniacal insanity, which are by no means incurable; and it points to a different pathological condition. In the one we have brain disturbance coming on suddenly, possibly from some sympathetic uterine or ovarian irritation, which causes great disorder of the cerebral circulation, and an acute attack of insanity, from which the patient may recover. In the other, first the brain is gradually altered and impaired by the constant excitation caused by the act of masturbation. We may compare the latter, though less in degree, to frequently renewed attacks of epilepsy, or of alcoholic intoxication, which produce mental disorder by their constant recurrence through a series of years.

"The insanity which masturbation produces is, for the most part, seen in young persons. But there is another form found in those of middle age, the result of sexual excess or masturbation, which is known under the name of general paralysis.

"The chief cause of this (general paralysis), suffice it to say, is sexual excess, whether in married or single life. (Maudsley and others also hold that sexual excesses are the all-important factors in the etiology of paretic-dementia. This view, however, is not sustained by Spitzka.)

"As in some, mere nervous exhaustion and bodily disorder are produced by masturbation and sexual excess, while

in others genuine insanity is the result; so other causes, as epilepsy and alcohol, give rise to insanity in some; to decay of mind and body in others. The original constitution and pathological condition of the individuals being different, the result is different, though the cause is the same."

"Patients whose insanity is caused by masturbation are generally, by inheritance, prone to mental disturbance. Masturbation by itself is not a frequent cause of insanity. In some persons, already predisposed, it may light up the disorder, and may co-exist with it in others without being the cause. The latter may and do get well, and when well, may relinquish the habit (like any other insane or filthy habit), but the habitual masturbator, whose insanity has been gradually developing for years, is incurable."

Savage, in his work on *Insanity*, says: "Sexual self-abuse, as a cause of insanity, is certainly fully recognized by the profession and by the world at large, but that it occurs in both sexes is not so fully known. I have already said that youth is a period of nervous instability, and that it is a period when smaller shocks will cause an upset or derange the balance.

"The whole of a new side to the life is being developed. At this period of instability, excess of any kind—especially excesses that act not only on the body, but on the moral nature—are very serious in their consequences. Masturbation does produce a certain amount of insanity—of this, I have no doubt whatever; but it produces insanity chiefly, if not solely, in those who are highly nervous. * * *

"Masturbation is a frequent cause of insanity—may occur as a cause of insanity in either sex—but it occurs still more frequently as a symptom of mental disorder. Youths who have given way to it pass into a state of self-analysis, and of study and contemplation of their reproductive organs and their functions, in the same way that the ordinary hypochondriac studies his digestion. Thus, gradually, are developed ideas of impotence, of physical and moral ruin, something or other wrong being referred to the reproductive organs which no reasoning or explanation can efface."

Spitzka on *Insanity* says: "Excessive venery and masturbation have from time immemorial been supposed to be the direct causes of insanity. Unquestionably, they exert a deleterious effect on the nervous system and may provoke insanity partly through their direct influence on the nervous centres, partly through their weakening effect on the general nutrition.

"There are certain cases in which, while an original predisposition may have existed, masturbation is the factor responsible for the production of insanity. While there is no special form attributed to masturbation, yet those psychoses due to or accompanied and modified by this vice seem to have certain characters in common. Melancholia, stuporous insanity, katatonia, and insanity of pubescence are the forms most frequently found in masturbators. Such lunatics are usually retired, sly, suspicious, hypochondriacal, indolent, mean and cowardly.

"The prognosis of the psychoses associated with masturbation in males is bad. * * * In females masturbation has a good prognosis, probably because the effects of the vice are far less severe in the female than in the male sex, and because it is but rarely practiced with persistency and for long periods by the former."

[This does not correspond with the more limited experience and observation in my practice, as some of the most persistent, most obstinate, and apparently most hopeless cases have been females.]

"A variety of primary deterioration, marked by moral perversion, is observed in young victims of the habit, which yields to treatment if the habit is abolished; if unchecked, it culminates in complete fatuity.

"False taste and smell perceptions are common in hypochondriacal insanity and in paretic dementia. This applies also to masturbatory insanity, of which disorder such hallucinations are almost characteristic."*

* Dr. Paul F. Mundé (Am. Jl. Obstetrics, '82), in commenting upon an aggravated instance of masturbation in a female (age 22, reported by Dr. Bigelow, of Washington city), who had gone into melancholia, says: "Gynæcologists are aware that masturbation is a fruitful source of uterine disease, and superintendents of insane asylums admit that to this cause may be attributed a fairly large percentage of insanity. The primary factors (he says) in the causation of this pernicious habit are psychic and physical. The psychic may be subjective or objective. Subjectively are (1st) Tainted conditions of heredity. (2nd) Mental views distorted, though they may be verified by an equally distorted consciousness. (3rd) An internal propensity:—Objectively, 1st. Subjective states of mind when persistently dwelt upon. 2nd. The moral degradation of nurses. 3rd. The exciting conditions engendered by civilization—*i. e.*, unhealthy associations, unhealthy reading, unhealthy and stimulating diet, unhealthy ventilation, the free license of the drama, the close contact of the waltz, the manner of dressing, etc."

These liberal quotations from a few standard authors on insanity, together with the experience, doubtless, of all asylum physicians, fully establish the relations of masturbation to insanity as a frequent cause, but still more frequently, perhaps, as a symptom.

From my own experience in asylum life, I have been led to believe that its causal relation would be found much more frequent than here set forth could exact and true histories always be obtained.

From the delicate nature of the subject, from the known evasion, secrecy, deception, and insincerity often, if not always, accompanying this vice, a true and correct history is usually unattainable. *The "Hæbephania,"* of Hecker, and *The "Insanity of Pubescence,"* of Skae and Maudsley, are doubtless, in many cases, due to this as the prime cause of the mental trouble.

This is a delicate and disagreeable subject, and one which is alike shunned by the unhappy subject and apparently by medical writers, from the scarcity of medical literature thereon; but when we are confronted, as we are in all our asylums, by these wrecks of humanity, brought about by this and other sexual vices, should not some greater effort be put forth to rescue these unfortunates?

As to the frequency of masturbation as a cause, or even as an assigned cause, of insanity, it is impossible, from the imperfect statistics, to determine.

Gross, in his work as above quoted, refers to the Longview Asylum in 1863 as reporting one-sixteenth of all cases assigned to this cause, and says: "The statistics of some of our other insane asylums exhibit an equally frightful proportion."

In the report of the New York Commission of Lunacy for 1890, about one-twenty-fourth of all cases are assigned to this cause and one-sixteenth to sexual vices. And in the Minnesota State Hospitals this cause stands second on the list only to intemperance—the proportion to all cases being about the same as in New York.

TREATMENT.—In cases where masturbation is only a con-

comitant symptom of some mental trouble, as before said, when the mental trouble is cured the habit ceases; but where it stands in a closer causal relation, the treatment is more difficult and the prognosis much more unfavorable.

In the earlier stages of this trouble, medical treatment unfortunately is rarely called for. It is only when some alarming feature is developed that the general practitioner is applied to for advice.

Then, for the most part, it is simply an evidence of loss of self-control, and is best met by such moral, hygienic, and therapeutic measures as shall allay the local and general hyperæsthesia, build up the general system, and improve the moral and mental status of the individual. The removal if possible of all exciting causes must precede any rational plan of treatment.

In many cases, however, where every known nerve tonic and sedative has been tried, every mental and moral device to encourage, strengthen, and support reformation, every mechanical and restraining measure has been used without success, and the victim is rapidly falling into fatuity, or some equally hopeless mental disorder, the question comes to us, can anything more be done?

Heroic measures have been suggested and tried. Castration and öorophorectomy have been advocated and have been practiced, but, as far as my knowledge goes, without any marked relief. The centres of sexual sense once developed in the central nervous system, cannot be obliterated by the removal of external excitations, though they may perhaps be obtunded.

This, however, is doubtful, as fully illustrated in a case coming under our observation in 1887 in the Southwestern Asylum. A young man, at his earnest request, had been castrated in 1885 by his physicians in Bland county, Va., for the cure of masturbation. He experienced no relief and no diminution in sexual power or desire. The case is fully reported by Dr. I. R. Godwin in the *Transactions of the Medical Society of Virginia* for 1887.

"The scar of castration is a stigma," and, to avoid this, other surgical measures have been suggested and tried.

Dr. S. F. Pomeroy, in *Boston Medical and Surgical Journal*, 1869, reports the successful treatment of masturbation by tying the spermatic arteries.

In the same journal, 1888, Dr. T. Haynes describes a surgical treatment of hopeless cases of masturbation, whereby he succeeded in three reported cases (aged respectively 18, 30, and 36) "in improving the mental and physical condition of all, while the sexual appetite was as effectually destroyed as by castration." His method was by removing parts of the spermatic ducts; an incision midway between the external inguinal ring and the testes laid bare the duct, from which a half inch was resected and the slight wound closed.

From a therapeutical and physiological standpoint, I have doubted the utility or even justification of such measures from reasons stated above, while at the same time I feel that in many of these cases of hopeless masturbatory insanity any heroic treatment which promises the most remote chance of relief should be tried.

It is, alas, too true, and it is a painful thing to say, that "society, with the refinements of civilization, tends only too often to pervert nature."

"Education too often exalts too much the faculties of the mind to the detriment of the forces of the body."

"Religion—that only safeguard of the soul which commands us to subdue the feelings and passions—can aid in maintaining pure morals, and causing chastity to flourish."

I have presented this imperfect and partial review of the subject, with these desultory and hastily prepared observations; and if I can thereby call forth the experience of members of this Association, I shall feel that the object of my paper has been attained, and my effort in this direction fully rewarded.

ART. III.—A Plea for Colotomy in Rectal Diseases, with a Report of Three Cases.

By SAMUEL T. EARLE, M. D., of Baltimore, Md.,

LATE RECTAL SURGEON TO THE UNION PROTESTANT INFIRMARY.

The almost universal prejudice that exists to the operation of colotomy, as a means of relief either from existing or inevitable future suffering, leads me to add my testimony to that of Dr. Chas. B. Kelsey and others, who are so urgently trying to extend its field of usefulness, and to repeat some of the good reasons set forth by them in its behalf. To the general practitioner, almost without an exception, and probably to the majority of surgeons, it is chosen second only to death, and, as a rule, is postponed to such a late hour that much good that would otherwise be accomplished by it, and the untold suffering it would save, is lost. In the language of Dr. Kelsey, "There can be no argument in favor of colotomy so strong as a single experience with a case of cancer of the rectum left to its own course, and termination in fatal obstruction; and I think that no matter how strong one's prejudices against an artificial anus may be, a single case of this kind will convert him. There is no more painful death, and no class of cases in which the surgeon appears at a more hopeless disadvantage." (Kelsey, *Stricture of the Rectum*, p. 34.)

Colotomy should not be looked upon solely as a means of preventing or overcoming complete obstruction of the rectum or colon. There are other advantages that commend it very strongly, such as the relief from pain and distressing tenesmus it affords, and staying the more rapid progress of the disease, by lessening the amount of irritation from the faecal matter passing over the diseased surface.

One of the principal efforts of the advocates of colotomy has been to extend its field of usefulness, beyond cases of stricture and total obstruction from other causes, to other diseased conditions of the rectum. While these efforts have been somewhat abridged by the recent very successful attempts at excision and resection of the rectum, and par-

ticularly since Kraske has taught us a ready method of reaching and excising the entire rectum from below and behind, yet there are a number of cases to which neither excision nor resection are applicable, and in which colotomy offers the best, and often the only hope of relief.

In addition to the cases that are usually conceded to demand colotomy—such as carcinoma of the rectum, cases of obstruction from pressure outside of the bowel, old fibrous strictures too high to be reached by proctotomy, and fistulæ—I would urge the addition of those of chronic and otherwise incurable ulceration of the rectum and sigmoid flexure. It is to this class of cases to which I wish particularly to call the attention of the profession in this connection. While they generally come under the class of cases for which the operation is done, yet the good results obtained by it are not sufficiently extolled, and it is seldom done.

Of a total of 351 colotomies, collected and reported by Dr. W. R. Batt (*Amer. Jour. Med. Sci.*, Oct., 1884, p. 423), only four were done for ulceration. I refer particularly to that class of cases of chronic follicular and dysenteric ulceration, the subjects of which are so frequently found as hopeless invalids in our homes for incurables and almshouses—cases that have been otherwise doomed to a life of invalidism and suffering, that might by this means, with very little risk to life, be made comfortable and self-supporting.

The deplorable condition to which the subjects of colotomy are supposed to be consigned is not nearly so bad as is generally supposed. The patients, as a rule, are able to attend to ordinary light duties, after several weeks following the operation, and have but a single evacuation from the bowels in twenty-four hours, which is generally preceded by sufficient warning to enable them to prepare for it.

The three principal points of advantage gained by the operation for this class of cases are, viz., the physiological rest obtained for the bowel; the opportunity afforded to

wash out the diseased portion of the bowel often and thoroughly, by simple and medicated water; and the possibility of being able to close the colotomy opening subsequently, when the ulceration has healed, should it be deemed advisable.

The dangers of the operation have also been lessened very much by the recent advances in abdominal surgery generally; so that Cripps has been able to report forty-one cases done by him with only one death, and Kelsey twenty-six cases with a mortality of three, not any of which, however, were caused by the operation, the patients having sunk from the exhaustion produced by the disease.

I would like to say a few words about the comparative merits of the two generally recognized methods of performing this operation; or, perhaps, it would be better, from what is to follow, to say I wish to express my preference. The one is known as Amussat's lumbar colotomy; the other, Littré's inguinal colotomy. The many advantages, together with the very few objections urged against it, have made the latter operation very much more popular at the present day.

The principal objection which was formerly urged against it—that of opening the abdominal cavity—has been almost entirely overcome by the comparative safety with which it is now done, under proper antiseptic precautions; and from the additional fact, that the same objection often holds good in the lumbar operation, from abnormalities in the position of the colon; from the existence of the mesentery at this location of the colon, contrary to the rule; and from accident of the operator. Its advantages are the ease and certainty with which the operation is done, and the bowel reached; the opportunity it offers for further exploration, and even for a more extensive operation—should it then be found necessary—and the ease and readiness with which the artificial anus can be attended by the patient in this locality.

I shall not attempt here to go over the details of the operation for inguinal colotomy, which has been so satis-

factorily done by Kelsey and others—by the former, very explicitly, in a monograph on “Stricture of the Rectum,”—but only to emphasize a few points mentioned by him, which I have not seen elsewhere, and which have either been obstacles to me, or from which I have heretofore failed to be benefitted. After making the incision through the abdominal wall and exposing the colon, he recommends that it should be drawn well down, until it is held firmly by the mesentery; that such a procedure will prevent future prolapse of the mucous membrane through the artificial anus. It was just such a prolapse which gave me considerable trouble in my first case; less in the second, but not any in my last, owing very probably to the fact that I did draw the colon well down in this case, but for another purpose. As it has been followed by this unexpected result, I shall, in the future, bear in mind his suggestion. He also advises the passage of a harelip pin under the loop of the colon after it has been drawn up through the opening in the abdominal wall, for the purpose of holding it firmly in that position, should straining occur from the effort to vomit, while under the anæsthetic, and in order to make the sharpest possible spur in the posterior wall of the colon. The manner of passing it is through the skin, at the juncture of the middle and lower third of the incision, half an inch from the edges, through the entire thickness of the abdominal wall, then through the mesentery close to the gut, and finally through the opposite abdominal wall. It should be left *in situ* for six or seven days. I think this recommendation well worth bearing in mind.

The last suggestion of his to which I wish to call your attention is one that I saw the need of very much while caring for my last case. It may seem but a trifle, but if unheeded, will give you a great deal of trouble, as it did me, and an immense amount of pain to your patient. He advises, in dressing the wound, to first cover the exposed colon with a piece of rubber protective, to be followed by the usual bichloride gauze, absorbent cotton and bandage,

because there will be so much lymph thrown out that it will cause the gauze to adhere so closely to the colon that it will with great difficulty be loosened from it.

CASE I.—Infant daughter of Mr. C. R., with an imperforate rectum, the anus being normal, but the rectum ending in a blind pouch some distance above the depression made by the anus. I was called to see it, by Dr. J. Pennington, the night of the second day after its birth, and found it suffering very much from a very tense abdomen and very frequent vomiting. Dr. Pennington had tried to puncture the blind cul de sac of the rectum through the anal depression, but failed, and I tried to accomplish the same by dissection without success. It being necessary to give the child immediate relief, we thought it necessary to perform a colotomy, and selected the inguinal region as the easiest and most practical in this case.

I made the usual incision through the abdominal walls, about an inch above the superior spinous process of the ilium, and extended it for about two inches, parallel to Poupart's ligament. I found the colon without much trouble. The urgency of the case required me to take the risk of opening the bowel at once, which I did, after stitching its walls to the sides of the abdominal opening. A good evacuation of the bowels soon followed the opening of the gut, which was followed by the subsidence of all the distressing symptoms. The child made a satisfactory and uninterrupted recovery. It was subsequently very much annoyed by the prolapse of the mucous membrane through colotomy opening. It subsequently died of diarrhœa, about eight months afterwards, during the succeeding summer.

CASE II.—Mrs. E., had been suffering from carcinoma of the rectum, and subsequently extended to the uterus, for the last eighteen months. For several months her evacuations from the bowels have been attended with increasing difficulty, pain and tenesmus, which were only rendered endurable by large doses of morphia.

Jan. 19th, 1892.—I found she had not been able to relieve the bowel for about one week, and that the rectum below the stricture was entirely free of fæcal matter. I decided it was necessary to do a colotomy, and, assisted by Drs. Klowman and Giles, proceeded to do so, again selecting the inguinal operation. After making the usual incision in the abdominal wall, had very little trouble in bringing into

view the colon, which I found impacted with very hard scybala at intervals, the intervening spaces being entirely free from faecal matter. Again I thought it hazardous to delay opening the bowel, and felt there was very much less than the usual risk in doing so, on account of the contents being so hard and dry. I selected one of the spaces between two of these hard scybalous masses for the opening, which I made after first securing properly the colon to the abdominal opening. My expectations were realized with regard to not having any trouble from the discharge of the faecal contents of the bowel, not a drop exuding, and I left the scybalous masses *in situ* until the bowel had adhered sufficiently to the abdominal opening. The patient, although extremely weak and emaciated from the disease, made a good recovery from the operation, and has ever since gotten along very much more comfortably with the distressing symptoms referable to her rectum. She still continues to live.

CASE III.—Mr. J. B. W., æt. 24 years, came to me Nov. 5th, 1891, complaining of frequent passages of blood from his bowels, which were unattended with pain, or tenesmus, except occasionally some slight pain in the abdomen. This had continued since the previous July, when it followed a very slight attack of diarrhœa. He had been treated by his family physician for acute dysentery, but without benefit. He was having six or seven stools (each containing blood, as a rule,) a day when he came to me.

A careful examination, both by the finger and speculum, failed to show any cause or source for the discharge of blood. His evening temperature was only 99° Fah. I had his stools examined for amœba and tubercle bacilli, with negative results. I advised complete rest and a milk diet. At the end of six weeks, during which he steadily grew worse, and still being unable to ascertain the cause, I got Dr. Tiffany to see him with me. After a very careful examination, he also failed to make a diagnosis. We then examined him under the influence of ether, also with negative results, except a slight enlargement, which was not hard, in the left inguinal region. As he was at this time having from twelve to fifteen stools in twenty-four hours, in which there was a large quantity of blood passed, it became necessary to do something more radical to meet the needs of the case. Dr. Tiffany advised an inguinal colotomy, with the hope of cutting down upon and excising any growth that might be the cause of the hæmorrhage, or to

facilitate the local treatment of any ulceration, if such should be found to be the cause. To this I agreed, considering it most excellent advice.

Accordingly, on February 23rd, 1892, assisted by Drs. Tiffany, Gavin, and Giles, I proceeded to do the operation under strictly antiseptic precautions. I used for disinfecting the skin of the abdomen, first, the wash of soap and warm water, then a solution of permanganate of potash, followed by the solution of oxalic acid, and then of hydrargyrum bichloride 1-1000. Upon cutting down upon the colon, we found it very much thickened and enlarged as far up as we could reach, and also the rectum to within a few inches of the anus, but all perfectly soft. Some few of the post-rectal glands were slightly enlarged. The upper portion of the part of the colon examined, which was that reached after using considerable traction upon it, was the portion that seemed most affected, and it was this portion we thought best to attach to the abdominal opening. I drew the bowel well out and attached it well towards the mesentery on each side to the abdominal opening, thus making quite a sharp spur in the lumen of the gut. We left it unopened for thirty-six hours. In dressing it, I unfortunately applied the gauze directly to the exposed bowel, and had any amount of trouble in removing it, it had adhered so closely. Subsequently, I found the rubber protective, suggested at the time by Dr. Gavin, and, as I afterwards found, advised by Dr. Kelsey, to work admirably.

Upon opening the bowel, we found a perfectly smooth, but intensely hyperæmic, mucous membrane as far as we could reach, both above and below. I cut out a thin strip, the entire thickness of the bowel, and got Dr. Councilman to examine it. The following is his report:

"Intense inflammation of the mucous membrane, with slight and acute ulceration—the follicles are enlarged, the mucous membrane infiltrated with pus, and the glands dilated. There is no evidence of tumor formation."

The discharge that followed the opening of the bowel for some days was profuse, prune juice in character and intensely offensive. Similar discharges continued per rectum until the 26th inst., three days after the operation. On the 27th inst. there appeared in the wound a slough, which was also examined by Dr. Councilman; he found it contained no glandular structure, and most likely came from the sub-mucosæ.

March 1st.—In order to make a more careful examination

through the opening in the colon, he was etherized again, and both Dr. Tiffany and myself examined him very carefully, but failed to find any growth, either above or below. Dr. Tiffany suggested that the bowel should be flushed out daily with a solution of zinci sulph. gr. ss. to the \mathfrak{z} j, which was done freely, first using pure water, then the solution of zinc. Also to give him gtt. iij. doses of ol. flea bane four times each day, and to drink Rockbridge Alum Water. Under this treatment, with the addition of arsenic and iron, he steadily improved, and was discharged from the hospital April 13th, 1892, just about two months after admission. He was then having but one stool a day generally, which was normal; nor had there been any blood or mucus with two exceptions, when there was just a small quantity, for about three weeks prior to his discharge. He was able to return to his duties as teacher.

Up to April 23rd, 1892, when I last saw him, there had been no prolapse of the mucous membrane through the abdominal opening. It will be borne in mind that I drew the colon well down before attaching it.

ART. IV.—Therapeutics, Present and Prospective.*

By C. W. BEAUMONT, M. D., of Clarksville, Tenn.

PRESIDENT TENNESSEE MEDICAL SOCIETY, ETC.

Materia medica, as now represented in our national dispensaries, presents a catalogue of substances, officinal and unofficinal, which with their numerous preparations, simple and compound, dry, fluid and solid, and some hundreds of miscellaneous formulæ, amounting to more than nineteen thousand parts. Marvellous as this great work must be regarded on account of its magnitude, and certain titular emblems of therapeutical authority attesting its real merits, there are nevertheless weighty objections to it, professional and popular, which demand serious consideration.

Of the many exceptions, it will suffice to mention those following: The large number of drugs long since passed

*Abstract of a paper read before the Tennessee Medical Society, April 12th, 1892.

into disuse because they are worthless, and many others of such feeble or doubtful power as to be practically useless, and others not medicinal, but used chiefly in the arts, are still retained. All these, together with unofficinal drugs and formulæ eliminated, would reduce the ponderous volume to dimensions that would facilitate, rather than hinder ready and frequent reference to its contents. The classification and value of individual drugs are wholly based on clinical observations alone, and these furnished by different authors, the essential conditions of whose separate work are obviously so various as to render their reports conflicting and often contradictory. The crudeness of materials from which are derived our medicaments, and the widely varying qualities noticeable in each particular drug, resulting from physical, chemical, and other causes, leads to inappropriate dosage, and hence to uncertain or capricious effects, or on the other hand prove to be utterly inert. Accordingly, we are not certain when ordering a formula to be given in doses of a teaspoonful, whether the patient will get a full or a minimum dose, nor indeed whether much or little, or any medicine at all will be received.

But these, and all other professional exceptions to *materia medica* weighed together, do not counterbalance one, which is the only valid objection ever alleged, or that can be urged by the people against our measures; and it is, the extremely offensive character of medicines, as we commonly prescribe and dispense them. It is the sole cause of the many alienations from us in the past, and the still daily addition of perverts, to the delusions of recusant and heretical, so-called physicians. We must admit this objection to be just and reasonable, inasmuch as we very well know, our medicaments are generally obnoxious to taste, smell and sight, provoking the quick resentment of the most convivial stomach. We cannot, therefore, with justice to ourselves, longer afford to debar a complaint, the further refusal to meet and adjudicate which, is most unwise with regard to professional interest, and ungenerous to our clientage.

Assuming the above objections to be indisputable, a ques-

tion overruling all others in this branch of medicine confronts us, and it can be successfully answered by scientific medicine; alone and the question is not can we, but how may we surely and shortly overcome the objections, professional and popular, to the present *materia medica* and therapeutics?

Fortunately at this instant, therapeutics is in the plastic state of transition from an empirical art, where clinical deductions had placed it, to the plane of true science, to which it is being steadily elevated by the incessant labors of the physiologist, the bio-chemist, the microscopist and bacteriologist. As one by one, each drug in the catalogue is having assigned to it a definite and well-ascertained physiological force, as manifested in general effect, or by affinity for certain vital organs and tissues of the body, we may shortly expect the disuse of crudities, and the employment of perfect medicines only. Perfect medicines must possess the essential qualities—purity, precise division, accurate dosage in minimum bulk and permanent form, uniform power and ready solubility, and not repulsive to sight, taste or smell. Such a standard is readily attainable, although we must place the credit of showing us the way to it, where it belongs, to the extremes of nihilism, and highest potencies in therapeutics. .

We may accept the method of alkaloidal and pure chemicals, as devised by Dr. Burgraeve, which offers the best way of administering potent medicine, of uniform effect, and in agreeable form. By this method alone, may we overcome popular abhorrence of officinal crudities, as all these may be exhibited in the form of tasteless granules, even to little children, who take them without dislike.

Of the many decided advantages of active principle medication, may be mentioned that they conform to the standard of perfect medicines, a complete stock of which may be kept by the physician, in a space not larger than his obstetrical instrument case. The country physician may carry in his pocket a supply sufficient for his daily round, while the dispensing may be done without labor and the loss of

much valuable time. City practitioners also, will find this method greatly to facilitate their business, as from his pocket-case he may dispense the required medicines, in much less time than is occupied in writing a prescription with directions. In cases of emergency he is ready to act on the instant, without imperilling life by the delay necessary to formula writing, and sending to the pharmacy. He will besides prevent substitution, adulteration, and unauthorized repetition by others.

Very few physicians are sufficiently familiar with chemical reactions to recognize the changes occurring in crude medicines, imparting such variableness in their effects as to render them uncertain, and therefore unreliable. For this reason, if no others were apparent, crude polypharmacy may well be abandoned, in favor of the active principle method, suggestive of intelligent simplicity, or a very narrow combination of remedies.

There are other and novel aspects in which future therapeutics may be contemplated. One is the forcing through the skin of substantial medicines, by means of the electric current, already shown to be practicable and capable of a widely extended application.

Another, and one that may prove to be of the greatest possible value, is that which, accepting the germ origin of disease, yet insists that it is not the mere presence of a brood of microphytes within the body, which is a constant fact of animal life, but the toxic product generated by them, as the actual, exciting cause of morbid processes. Recent biochemical researches, having discovered the invariable presence in the liquor sanguinis, of a chemical agent or agents generated within the organism, and endowed with alexiteric and antidotal powers, these substances are to be utilized in resisting, neutralizing and expelling poisonous matter, introduced from without, or fabricated within the body.

These may be obtained from one person and used in another, whose system is insufficiently supplied with the needful antidote. A means will doubtless be devised, by which the resisting power of the organism may so nearly

be estimated, that in a given case, the quantity and quality of animal antidotal elements present are apparently short; the deficit will be obtainable; and it is not expecting too much to look for these potent chemicals to be produced in the laboratory, so that nature and art together will supply all the required elements of this class. It is, therefore, quite apparent, that besides the absolutely pure medicines which are found only in the alkaloids, and carefully assayed glucosides and metaloids, future therapeutics will enjoin the general use by inoculation, of appropriate attenuated virus, and animal or artificial chemical bodies hypodermatically, and the extended use of electrical force.

From these two sources, pure medicine in minimum bulk, and the natural and artificial chemical substances, future therapeutics will derive the most efficient means of preventing, opposing and neutralizing disease processes, and will calender this decade as the best and brightest in the history of therapeia.

ART. IV.—Third Act of the Drama of Syphilis.*

By HENRY A. ROBBINS, M. D., of Washington, D. C.

Alfred Fournier, in his "*Lecons sur la Syphilis*," Paris, 1873, gives the following striking analysis of the "drama" of the apparition and development of syphilis:

First Act.—*Contamination*.—The virus penetrates the organism by one mode or another.

First Interval.—*Apparent repose of the organism, incubation*. Nothing appreciable betrays the disease as yet.

Second Act.—Production at the point where the virus has penetrated, and only here, of a lesion called initial, which, for the time, constitutes the only expression of the disease.

Second Interval.—*Another period of repose of the organism*.—The initial lesion continues to be the only symptom by which the disease is expressed.

Third Act.—*Explosion of multiple and disseminated lesions, beyond and outside of the seat of contamination*.

* A Clinical Lecture delivered at the Central Dispensary and Emergency Hospital of Washington, D. C., on April 6th, 1892.

This is the period of visible generalization of the disease.

The Apostle James says: "Behold how great a matter a little fire kindleth." This text occurs to me whenever I look at the innocent looking chancre. When you first see it, it has passed through the hatching stage—the stage of incubation. It has successfully performed that rôle, in the First Act of the Drama of Syphilis.

Experimentation proves to us that the chancre—the initial lesion of syphilis—is only dangerous when it is allowed to play its part alone.

Paradoxical as it may appear, when it is irritated and aggravated, and, as it were, weeps tears of pus, then its venom is gone, and it gives rise only to a little sore, which soon passes away.

Really, the evolution of syphilis begins at the moment the germ (or whatever it may be) is imbibed, whether it be through an abrasion or through the soft and moist and delicate tissues, where they are generally located. There you see it, and you can count upon twenty-one days or more since it was conceived. It has thrown off its shell, so to speak, and has come out triumphant. It has played its rôle successfully, but before it retires from the drama it often points, with its lymphatic finger (octopus like), to its bubo in the groin, and, from its "raised plateau" induration, smiles at the roseolous blush, and points, with pride and glory, to the crown with which Venus encircles the brows of her votaries who worship at her shrine.

As we approach the Third Act of the Drama of Syphilis, memory takes me back to the scene at Hell Gate some years ago. For years Gen. Newton had, silently and almost unbeknown, an army of laborers, below the bed of the river, working like beavers, and as busy as bees, drilling through solid rock in every direction, making innumerable passage-ways, which were filled with dynamite, and through them all wires were laid.

When all was ready, a child pressed a knob, connecting the electric wires, and that mighty explosion took place, raising mountains high acres of water, and the terrible roar shook

the earth for miles. Then the work was over, and Hell Gate was shorn of its horrors.

The explosion which takes place in the Third Act of the Drama of Syphilis is far different. Demons that have been maturing are then let loose, and verily: Hell itself cannot be more horrible than is this vindictive disease to many who are in its grasp.

The first demon set free in the Third Act of the Drama is one called *Hypochondria*—a melancholy actor, who throws the victim into a state of great mental and physical depression.

Then the second actor, known as the demon *Anæmia*, puts in an appearance; and it has a taste for the vital fluid, and sucks away at the ruby red, leaving the white corpuscles. Thus, the heart's action is involved, the pump works less vigorously, and intermits and palpitates. The oxygenation of the fluid is interfered with, and consequently the victim gasps for breath and respiration becomes laborious.

Then appears another misanthropic actor, with sallow visage, known as the demon *Indigestion*, and plays its part well. It would be safe to place before the victim the choicest viands, for, like *Tantalus*, he cannot touch them.

In women, the demon *Amenorrhœa* appears, and adds to her woes; sometimes it gives way to one called *Menorrhagia*; but too often, during this Act of the Drama, she conceives, and this poor offspring, cursed by the sins of its progenitors, will have all the characteristics of the Third Act of the Drama of Syphilis.

The part played by the demon *Fever* is one learned in a place where "the fires never cease burning." It has frequently been mistaken for the quotidian type of intermittent fever, with nocturnal exacerbations.

Cephalalgia is the name of a vindictive demon, who places its victim on the rack, and, as it were, bores holes into his brain, and makes him yell with anguish. It will sometimes vanish during the day, but is sure to return at night.

The little demon *Sternalgia* grasps the victim by the throat, and calls to its aid its friend *Asthma*.

Vertigo makes the victim reel to and fro like a drunken man, and makes it appear to him as if he were a pivot, with all sorts of fantastic objects encircling his head. This demon is generally accompanied by one called Nausea, and they play their parts together.

Strabismus cocks the eye, and gives the victim a comical or sinister aspect.

Arthralgia loves to toy with the larger joints, such as the shoulder, elbow, and knee-joints.

Rheumatism is booked for a long rôle, but, like all actors, loves to play at night.

Alopecia now puts in an appearance; and if the victim has any personal beauty, it deprives him of it. Very often it gives him a pie-bald appearance. The hair encircling the bald spots standing up in every direction. It also takes away his eyebrows, giving him a ludicrous appearance, and also a sure sign to the whole world of the nature of his disease. The French writers call it the sign "*d'omnibus*." Sometimes it removes every hair from his body, from the crown of his head to the sole of his foot.

Demons come and go over the prominent parts of the bony skeleton called Osteocopic, forming nodes sometimes, and giving rise to pains terrific.

Sometimes, and not infrequently, the Drama is tame and uninteresting, and the Third Act is only ushered in by the appearance of Erythema, whose presence on the stage is a sure indication of Constitutional Syphilis.

I will now call your attention to patients illustrative of the *Third Act of the Drama of Syphilis*.

Not long ago I presented to you two patients, which gave you a better idea of the evolution of syphilis than you could have attained by years of reading and studies of venereal atlases.

One patient was a young pure-blooded African. The initial lesion was located in a long prepuce, just at the mucous fold. It was of the papular variety of Fournier, being in a sort of "raised plateau." There were the cord-like lymphatics extending to the bubo, and he was covered with a

popular syphiloderm, and there was a serpiginous circle on his forehead, and in his mouth were mucous patches.

The other patient was a young white man of light hair and blonde complexion. The initial lesion was supposed to be on the mucous surface of the prepuce, which was long and œdematous. A V-shaped piece had been cut out, but no chancre or chancroid could be found, but the bloody serous discharge from the meatus was indicative and diagnostic of urethral chancre. As with our other patient, there was the "ribbon" of lymphatic vessels leading to a bubo. This patient had a bubo in each groin—which, as in the preceding case, did not suppurate. From head to foot, he was covered with roseola. With the white patient, the demons Cephalgia and Rheumatism were most persistent. The colored patient only came a few times, but, sooner or later, he will be sure to return. The white patient you have seen to-day. I neglected to state that he had also double iritis.

Apparently, he is as well as he ever has been. We will carry out our three years' intermittent course of treatment, however, if possible.

Several years ago I was summoned, in the greatest haste, to a man who had suddenly fallen. A physician, who had also been called, had pronounced the case to be one of apoplexy. I had attended the man, however, who had chancroids that were phagedenic, and there was a suspicious-looking discharge from the meatus, similar to that of urethral chancre. I was awaiting the development of roseola before placing the patient on constitutional treatment.

The man's habits were those of a "bon vivant," and he was constantly under the effects of alcoholic stimulants. Here, then, was the stage of "general explosion" of the Third Act of the Drama of Syphilis that I had to deal with. The patient became maniacal, and delusions, at times ludicrous, and pathetic at others, followed each other. It became necessary to send him to friends who resided two days' distance by rail. He was placed in charge of a gentleman who, fortunately, was a man of great physical strength, and formerly a sailor by occupation. At night, when the train was speeding along at forty miles an hour, the patient darted out of the car, followed instantly by his attendant. The

patient attempted to jump off the car, and had partially succeeded, when he was grabbed by the collar and dragged back; and then began the struggle on the platform of the rapidly moving and swaying car. The description given by the gentleman who succeeded in conquering the maniac, and dragging him back into the car, was the most blood-curdling one that I have ever listened to. After this episode, several knock-down arguments had to be used before they arrived at the end of the journey.

This patient gradually improved, but it was fully three months before he acquired his usual mental equilibrium.

The history of his paramour was very similar. She was sent to the Hot Springs of Arkansas, and returned, as many do, without any improvement. For a time, she was an inmate of a mad-house; finally, in her case, death put an end to a checkered career.

I was not able definitely to follow up the history of the case.

In these cases, the demons that were set free were aggravated by the Arch Demon, Drink, which, sooner or later, brings most of its victims to the grave or asylum.

You will remember that in twenty-five per cent. of cases of syphilis, according to Alfred Fournier, the disease is acquired in an innocent way.

In this Act of the Drama of Syphilis, you will come to the aid of the sufferer, and the effects of your treatment will be marvellous; but more of that anon.

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Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

ART. V.—Diphtheritic Conjunctivitis—A Lecture *

By J. HERBERT CLAIBORNE, Jr., M. D., of New York, N. Y.

LECTURER ON OPHTHALMOLOGY, ETC., NEW YORK POLYCLINIC.

This morning I wish to say a few words on the subject of diphtheritic conjunctivitis—a rare affection. I cannot show you a case of it, but being general practitioners, you may have seen it; for, doubtless, in the practice of each one of you, you have come across epidemics of genuine diphtheria—not follicular diphtheria, but diphtheria that kills. When you cure ninety-five per cent. of your cases, you can be pretty sure that it is not diphtheria. What I refer to is a virulent form of the disease, in which the patients die choking, or from heart paralysis. You have all seen this, but I wonder how many of you have seen diphtheritic conjunctivitis?

Sometime ago a paper was read before a local medical society in which the frequency of diphtheritic conjunctivitis was spoken of, but it is of rare occurrence, and there are men of wide experience who have never seen it. I have seen twelve cases. The disease is probably caused by direct infection from the throat to the eye, but in my own experience I have had sputa of a diphtheritic patient coughed into my face and eyes and no diphtheritic conjunctivitis followed. Years ago, when they used to try and remove the membrane, a physician of my acquaintance was struck in the eye with a piece of membrane that was coughed up, but the conjunctivitis did not result.

This disease of the eye is the most fatal thing you can conceive of; I have never seen a case recover. You saw here the other day a case of gonorrhœal conjunctivitis which was formidable, but that was mild in comparison to diphtheritic conjunctivitis.

In the latter disease, there is not so much secretion, the eye being more or less dry, but the swelling is greater, the lids thicker; if you turn the lid, you will find that the under

* Delivered at the New York Polyclinic, March 30th, 1892.

surface is cracked and fissured, that the interior of the lid is lined with a hard, dense, unsecreting membrane. I have heard it said you can pull it off, but that it will return if you do. The lower lid is affected in the same way. There is some chemosis, though not so much as in gonorrhœal conjunctivitis. The pressure of this hard, fissured lid on the cornea is extremely dangerous, and it is by this means that these eyes are lost; ulceration takes place, perforation follows, the lens escapes, and the eye is destroyed in a short time.

An old patient of mine came to the Vanderbilt Clinic the other day with an extremely swollen upper lid. I made a diagnosis of diphtheritic conjunctivitis from the signs and history, for she had a child sick with diphtheria at home. The circumference of the cornea was slightly infiltrated, but the cornea itself was not affected. I told her that she would probably lose her eye, and warned her to be careful not to infect the other. In thirty-six hours she came to me again, and I found that the entire cornea had come out as a button; the edges had burst away owing to the intra-ocular pressure, and an aperture was left through which the vitreous was oozing; a large staphyloma formed, but it is gradually becoming smaller. This was an unusually rapid case.

As a rule, the eye is destroyed by ulceration, perforation, and prolapse of the iris and lens through the aperture, while in this case the whole cornea came away, and was followed by the lens and intra-ocular contents. The other eye was not affected; indeed, I have never seen a case in which both eyes were attacked with the disease. I have seen many cases of gonorrhœal conjunctivitis in which both eyes were affected, but this does not happen so frequently as you would imagine. Providence seems to be merciful in these matters.

I have seen this disease associated with diphtheria of the fauces, but more frequently it was not associated with it, and I have seen cases in which no clue to the manner in which the disease was contracted could be obtained; it is often to be traced to a case of diphtheria in the same house. There is nothing more characteristic than this disease, and

it is only necessary for you to see it once to remember it. The constitutional effects are not marked, not more so than in gonorrhœal conjunctivitis, but both produce mental depression.

As to treatment, there is little to be said. I do not think it is possible to save the eye in most cases, and there is only a bare possibility of saving it in some. If the case is a severe one, the eye will be lost with or without treatment. It is hardly of any use to make cold applications to the eye, yet they should be used, for they may cut short the multiplication of the bacteria. I do not know whether or not any of the new solvents, which are used to dissolve the membrane in the throat, would do good or harm. Somebody has used lime-juice on the membrane in the throat, and a preparation called papoid is said to digest it. Peroxide of hydrogen has also been used for the same purpose. We have made experiments with the latter on the human conjunctiva, but the results were negative—it seems to irritate the eye. Bichloride of mercury should be used as a wash, and atropine and cocaine may be dropped into the conjunctival sac to relieve the pain; but as the latter is due to deep-seated inflammation, you will have to use morphine to secure anything like rest.

The course of the disease is like that of gonorrhœal conjunctivitis. As soon as perforation takes place and the eye is lost, the inflammation begins to go down, like a vicious fiend who has worked all the harm he can do and then retires. The conjunctiva becomes almost normal after the inflammation has disappeared.

In prescribing the products of Manufacturing Pharmacists, we should be guided to a great extent by the business standing of the manufacturers. No other house in the South or West has a better reputation for strict integrity than the firm of R. A. Robinson & Co., Louisville, Ky. We do not hesitate to recommend the preparations advertised by them on page 28, this issue.

ART. VI.—Treatment of Chronic Inflammation of the Mucous Membrane of the Eye, Ear, and Throat.**By W. H. BATES, M. D., of New York, N. Y.**

LECTURER, ETC., NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, ETC.

Success in the treatment of chronic inflammation of the mucous membrane of the eye depends not so much on the remedy used as in the way it is used. One can do harm by using remedies too strong, too often, or in too large quantity locally. Each case is a study in itself, and treatment at first should be always tentative. In some cases of trachoma, for example, nitrate of silver, gr. x to $\bar{5}j$, may be beneficial, while other cases, apparently the same in severity, may not be relieved at all; and still other cases may be made worse by the use of silver of the same strength. The action of nitrate of silver is similar very nearly to sulphate of copper, zinc, iron, alum, etc.

Nitrate of silver is a remedy of great value in the treatment of chronic inflammation of the mucous membrane of the eye. It is especially indicated where there is discharge of mucus or pus. The strength is a matter of much importance. If used in too weak a solution, little benefit may follow the applications to the mucous membrane. If used too strong, it causes destruction of tissue. The strength to be used is in direct proportion to the amount of congestion or swelling of the mucous membrane. Where the swelling is great, stronger solutions may be applied, and in larger quantity than where the swelling of the mucous membrane is inconsiderable. When the nitrate of silver solution is of proper strength to obtain the best results from its use, on applying it to the mucous membrane, the membrane pales immediately, the swelling subsides at once, and the application causes no pain or discomfort to the parts whatsoever. Sometimes this effect is obtained with a solution, gr. v to $\bar{5}j$; in other cases gr. xx to $\bar{5}j$ is necessary, and even the saturated solution may be necessary to cause the membrane to pale. A saturated solution is rarely necessary, and it is

safer to begin with very weak solutions at first, and watch the immediate effect. In those exceptional cases where a saturated solution was used with great benefit, the patients made the statement that the silver made the parts feel cool. A strong solution may be used with benefit to-day, and if used to-morrow may do harm. With the improvement in the inflammation, the silver has to be used in weaker solution. A healthy mucous membrane of the eye cannot stand even a solution of gr. v to ʒj.

There are exceptional cases where the swelling and congestion of the mucous membrane of the eye is so great that even the stick of nitrate of silver is not sufficient to reduce the inflammation. The actual cautery has been used with great benefit in such rare cases.

The congestion and swelling of the mucous membrane of the nose and throat is often so great that the cautery is more frequently of benefit than in inflammation of the mucous membrane of the eye.

Nitrate of silver, after it has been used for a time, may cease to benefit. Sulphate of copper, or other astringents, may now be used with good results. Later, in the same patient, the use of nitrate of silver may be used with advantage.

The manner of applying local remedies is also important. A good way is to wrap the end of a light probe with fresh cotton, wet the cotton with the solution to be used, and apply it directly to the inflamed mucous membrane. It is better to use small quantities, and just enough, so that the solution does not run to parts not inflamed. Chronic trachoma of the upper lid, has been cured by applying nitrate of silver in this way only to the upper lid, while the trachoma of the lower lid remained stationary. Dropping the remedy into the eye with an eye-dropper does not succeed so well as when the applications are made directly to the inflamed membrane.

Ointments of various kinds are very useful in the treatment of chronic inflammation of the mucous membrane of the eye, ear, and nose. The strength of the ointment is

important. Yellow oxide of mercury may be used, gr. ij —1 to the ʒj. Severe inflammation, as a rule, requires that the strength of the ointment be greater than in mild cases. For example, a very bad case of phlyctenular conjunctivitis, with considerable photophobia, was not relieved at all by the use of yellow oxide, gr. xvj to ʒj, after several months' treatment. After using the ointment, gr. l to ʒj for several days, the patient seemed entirely relieved. No relapse after six months.

The use of goose grease and other ointments for an acute cold, is ancient history. Chronic inflammation of the nose and naso-pharynx, even when associated with hypertrophies, has been relieved by ointments applied externally and snuffed up the nose. The benefit may be due to relaxing the vaso-motor spasm.

The use of cleansing and antiseptic solutions in the eye and ear, are only beneficial when the cause of the inflammation is infection. A chronic suppurative inflammation of the middle ear can be relieved by the use of cleansing and antiseptic solutions. But a chronic inflammation of the middle ear, not caused by infection, is made worse by the use of cleansing or antiseptic solutions. A chronic trachoma, or an infectious inflammation of the mucous membrane of the eye, can be cured by thorough cleansing and antiseptic treatment in a very short time. But a chronic conjunctivitis not caused by infection, is not relieved by such treatment. And what is true of the eye and ear seems true also of the nose and throat. Spraying the nose and throat to cleanse the mucous membrane in those very common forms of inflammation not caused by infection, not only may fail to relieve, but is often injurious.

The application of remedies with the spray is objectionable, because the remedies used reach parts which may be healthy. The ear is injured by spraying the nose. Chronic middle ear inflammation results from the use of even lukewarm water sprayed or snuffed up the nose. It is safer to apply remedies to the mucous membrane of the nose and throat by means of cotton wrapped on a fine probe. In

this way the action of the remedy can be limited to the diseased areas.

Hygienic measures are decidedly of value in obstinate cases.

Constitutional treatment is often indicated even in cases where the cause is one of local infection.

Remedies which are beneficial in acute inflammations, are often beneficial also in chronic inflammations.

A patient with trachoma who suffers from either rheumatism, syphilis, scrofula, dyspepsia, etc.,—the trachoma will improve more rapidly if the general disease is relieved. As a rule, tonics are required—and any remedy which improves the vitality of the patient lessens the inflammation of the mucous membrane.

Tincture of the chloride of iron is a very useful remedy in acute tonsillitis and in diphtheria. The dose depends very much upon the severity of the inflammation. The greater the inflammation, the larger the quantity of iron which can be taken with benefit. In diphtheria, a severe inflammation of the mucous membrane caused by infection, the vitality is lowered—there seems to be need of a powerful tonic. And as the inflammation improves, there is less need of the iron, shown by its upsetting the stomach.

In chronic inflammations of the mucous membrane there seems to be the same need of a powerful tonic as in diphtheria. Tincture of iron may be given in doses of a drachm well diluted six times a day and with great benefit. As the inflammation of the mucous membrane improves the dose has to be decreased.

Iron in chronic inflammation of the mucous membrane resembles iodide of potassium in syphilis. In syphilis, as is well known, it frequently happens that large doses of the iodide can be taken with benefit; and in some cases large doses are necessary to obtain benefit with improvement in the symptoms of syphilis; the large doses of iodide are not so well borne and smaller doses are beneficial.

In chronic inflammation of the mucous membrane of the eye, ear, nose, and throat, tincture of iron can be given in

large doses with benefit—and in some cases large doses are necessary to obtain benefit; with improvement in the symptoms of inflammation of the mucous membrane, the large doses of iron are not so well borne, and smaller doses are beneficial.

CASE I.—Miss F., aged 3, had catarrh of the eyes, ears, nose, throat, and bronchial tubes, with a capricious appetite, and bowels irregular. At night the child had great distress in breathing. The condition had lasted for some time.

Treatment consisted in restricting the diet to bread and milk—no other treatment. The child did not like milk, and would not touch the bread for three days. It had to be starved before it would accept this diet. In two weeks, the bad breathing at night had disappeared, the general catarrh improved rapidly, and the child seemed perfectly well at the end of a month. The child gradually was allowed meat and vegetables, but no fruit and no sweet things.

At the end of three years, still free from catarrh.

CASE II.—*January, 1888.*—Miss H., aged 2, has an acute inflammation of the middle ear—purulent discharge. Local treatment relieved the active symptoms, and the patient disappeared from observation.

March 14th, 1892.—The patient presents herself for treatment. The mother states that the child has had a slight discharge from both ears for four years; that she is very deaf at times, and has a chronic cold in her nose and throat. The child is nervous, pale, and run down generally. She has chronic naso-pharyngeal catarrh and chronic suppuration of middle ear. Mouth-breather.

The mother had consulted a number of physicians, who have used various methods of treatment without relief. The patient has grown steadily worse.

Treatment which seemed to relieve the symptoms:

Syringing the ear with hot water three times daily.

The use of goose grease on the forehead, on the skin of the nose, and snuffed up the nose several times daily.

No fruit, no sweets.

After each meal, patient lay down in a quiet place and tried to sleep for fifteen minutes.

Out-door life. Dry rubbing of the skin twice daily.

At the end of a month, the discharge had entirely ceased from the ear, and the drum membranes became normal in appearance. Hearing normal—watch at 5 feet. The naso-pharyngeal catarrh had ceased. No longer a mouth-

breather. Skin ruddy. No longer nervous. Appears cured.

CASE III.—Mr. M., aged 42. Chronic trachoma of both eyes. General health good. Vision reduced in both eyes. Chronic naso-pharyngeal catarrh.

Local treatment of the mucous membrane of the eye with nitrate of silver *relieved the symptoms of the trachoma and improved the vision to the normal.*

Treatment of the nose with the galvano-cautery, chromic acid. The removal of hypertrophies by various operations for a year did not cure the nasal symptoms.

After this treatment had been stopped for three months, the nasal catarrh still continued. Vaseline was now used on the outside of the nose and snuffed up both nostrils. At the end of two weeks the nasal catarrh seemed entirely relieved.

CASE IV.—Mr. F., aged 30; telegraph operator; chronic nasal catarrh; general health good. After using various astringent solutions in the nose at different times for several years, the symptoms were not relieved. Vaseline, applied externally over the nose and snuffed up the nostrils, was followed by complete relief after several weeks' treatment. He works in a room where the air is bad and by an artificial light; after working for a few hours, his nose becomes stopped up; vaseline relieves him almost immediately.

CASE V.—A boy, aged 2; chronic naso pharyngeal catarrh after measles; general health good. Vaseline was used for several months without relief. Goose grease had a better effect, and its use was followed by complete relief in a few weeks.

Chronic naso-pharyngeal catarrh in elderly people cannot be relieved by local treatment. General treatment seems to be indicated.

CASE VI.—A shoemaker, aged 73, had chronic naso-pharyngeal catarrh. O. M. C. C. Tinnitus. He was very anæmic. Appetite poor.

Tincture of iron ordered, ten drops well-diluted after meals. No other treatment. The dose was rapidly increased. At the end of a week he was taking 5j hourly; and in two weeks after he began treatment, he took 5ij almost every hour through the day. Two ounces of tincture of iron was his daily dose. The chronic naso-pharyngeal catarrh improved rapidly, and his appetite returned. The hearing improved, and the noise in his ears became less.

With the improvement in the catarrh, the iron began to disagree; and finally, when the catarrhal symptoms had entirely disappeared, he could not take ten drops of iron without upsetting his stomach.

The three following cases of trachoma show that an infectious inflammation of the mucous membrane of the eye resists local treatment when the general condition is poor.

CASE VII.—A boy, aged 13, was treated at the New York Eye Infirmary for chronic trachoma. General health poor. All kinds of local treatment were employed without relief. He was taken into the hospital, and a number of operations performed, which did not succeed in affording relief. Later jecquirity was tried—jecquirity is a remedy which generally relieves very bad cases of trachoma—but the patient nearly lost both eyes following this treatment. Finally local treatment was stopped; the boy fed up, and was compelled to spend most of his time out-doors in the sun. Very much improved.

CASE VIII.—Mr. M., aged 40, living in a tenement house. Chronic trachoma of both eyes. Was treated with blue-stone three times a week for six months, and at the end of that time his eyes were much worse.

September, 1891, began treatment. Nitrate of silver was applied to the conjunctiva of both eyes three times a week. The trachoma grew steadily worse. At the end of three months an operation under ether was done. The retrotarsal folds were scarified, and bichloride $\frac{1}{500}$ rubbed in vigorously with a tooth-brush (grattage.) In two weeks, the eyes were very much improved. A few months later, relapsed—relieved by a repetition of the grattage operation.

This patient has chronic rheumatism, which keeps him confined at times in a stuffy room, with poor light and bad air.

During the periods when he remains in the house the eyes are worse. When he is able to be out-doors the eyes improve. He frequently tells me that after he has been in the house for a few hours, the intolerance of light and the discharge become worse. After being in the open air for about an hour the discharge lessens, the photophobia almost disappears, and the eyes feel relieved.

CASE IX.—Miss M., aged 18, living in the same house with the preceding case. Chronic trachoma ten years' duration. Her general condition is good. She seems to be in perfect health.

January, 1892.—Operation performed on both eyes under ether. The mucous membrane was scarified and rubbed vigorously with bichloride $\frac{1}{500}$ (grattage.)

February, 1892.—No symptoms of trachoma.

May 10th. 1892.—Still relieved entirely.

A study of these and other cases of chronic inflammation of the mucous membrane of the eye, caused by the infectious matter of trachoma, seems to show that local treatment used alone can cure only those cases where the general health is good.

The following two cases emphasize the importance of diet in the treatment of obstinate cases:

CASE X.—A boy, aged 7, had suffered from a painful inflammation of his eyes for three years. He had been under treatment by different physicians most of this time with very little relief. Examination of his eyes showed typical phlyctenular conjunctivitis. The usual local remedies for this condition were tried in turn. The mother brought the child faithfully to the clinic for a year, and at the end of this time the eyes were no better. In conversation with the mother, it was learned that the child was cared for during the day by the grandmother, who persistently gave the patient candy and fruit against the advice of all the physicians who had prescribed for the child. The mother now took the child away and looked after it herself, and stopped the sweets and the fruit. In one month, the eyes seemed entirely well. Three years later, no return of the inflammation of the conjunctiva.

CASE XI.—A woman, aged 45, had chronic conjunctivitis which resisted treatment. She was seen one day eating candy, and when questioned, said that she made it a practice to eat a quantity of cheap candy every day. After stopping the candy, the chronic inflammation of the conjunctiva recovered promptly.

Three cases of chronic suppuration of the mucous membrane cured by cleansing and antiseptic treatment are now reported.

CASE XII.—This was a case of *dacryo-cystitis* which seemed to show that free drainage was not sufficient to relieve a chronic purulent inflammation of the mucous membrane of the lachrymal sac. A woman, aged 35, had a purulent discharge from the lachrymal sac, continuing a

year after an operation had been performed to cure the condition by opening the sac and nasal duct, and dilating with lachrymal probes once or twice a week up to the time the patient came under observation. A No. 9 Bowman probe could be passed easily down the nasal duct into the nose. Patient stated that she tasted the alum wash used to bathe her eye, showing that the duct was open. Treatment consisted in syringing the sac and nasal duct with warm water. The water when syringed into the lachrymal sac soon flowed out of the nose in a steady stream. The syringing was kept up until the water came away clear, and then nitrate of silver gr. v to ʒj injected. This treatment was kept up daily without the use of probes for two weeks, when the symptoms seemed entirely relieved.

CASE XIII.—*Chronic Dacryo-Cystitis—Impassable Stricture—Lachrymal Fistula. Cured by simple treatment.*

Miss I., aged 35, had a purulent discharge from the lachrymal sac for some time. The nasal duct seemed impassable from a bony obstruction. Seven operations performed had not relieved the patient. At the time the patient came under observation, the smallest probe (Bowman, No. 1) could not be passed through the nasal duct without great difficulty, and without causing the most excruciating pain to the patient, and some hæmorrhage. There was a fistulous opening one-half inch below the inner corner of the eye on the side of the nose, covered by a crust one-half inch square. Syringing the sac, the water spurted out of the fistulous opening and did not pass into the nose. The sac was syringed with hot water until the water came away clear, and then a solution of nitrate of silver, gr. v to ʒj, injected. At no time was the patient able to state that the water or nitrate of silver entered the nose. This treatment was kept up daily for six weeks, with gradual but steady improvement, until cured. Six months later, fistula still closed, with a very slight scar hardly noticeable. No return of the purulent discharge or epiphora.

CASE XIV.—Mr. S., aged 25, had a chronic suppuration of both middle ears for twenty years; general health good. He was treated in June, 1885. Treatment consisted in thorough cleansing of the middle ear by syringing with hot water, and by the use of inflation of the middle ear. It required about an hour's work twice a day, early in the treatment, to remove the secretion thoroughly. At the end of a month the ears were perfectly dry.

June, 1891, six years later, no return of the purulent or other discharge from the middle ear.

In the treatment of such cases the cleansing must be most thorough. The discharge becomes at times thick, tenacious, almost insoluble in peroxide of hydrogen water or alcohol and its removal is most difficult. If left, causes re-infection.

There is a form of chronic inflammation of the mucous membrane of the eye which is characterized by severe symptoms, without the appearance of much local congestion or swelling of the membrane. The discharge of mucus may be quite profuse, the intolerance of light may be extreme, the eyes may water in the open air or in a close room, and the mucous membrane be not very much inflamed. The symptoms of inflammation seem to be, in their severity, out of all proportion to the inflammation of the mucous membrane. The eye may be, in all other respects, nearly normal. This form of inflammation occurs in individuals whose general health seems good, as well as in those whose general condition is poor; it is very common. There are very few people who do not suffer from it, more or less, at different times. The relief of this form of conjunctivitis is usually a difficult matter. Local treatment is seldom curative. The treatment which relieves many of these cases is dry rubbing of the skin night and morning. Some are cured by nasal treatment, and others are not relieved at all by such treatment. Rest of the eyes does not relieve. Active exercise, especially if the patient enjoys it, is of great benefit; but exercise which is disagreeable to the patient has failed to lessen the symptoms of inflammation.

What is true of the eye seems to be true also of the nose, throat and ear. There may be a great deal of discharge from the mucous membrane of the naso-pharynx without much swelling or congestion of the mucous membrane. There may be well-marked deafness, and the inflammation of the mucous membrane of the Eustachian tube and middle ear be very slight. Some persons have severe symptoms of local inflammation from what seems to be slight causes. The principles of treatment applicable to the mu-

cous membrane of the eye, hold good in the treatment of the nose, throat and ear.

CASE XV.—A business man, aged 30, has had trouble with his eyes for a number of years. The eyes itch, stick together in the morning, water profusely in the open air, great intolerance of light, especially gas light; chronic conjunctivitis. The mucous membrane of the eye-lids very slightly congested. Eyes otherwise nearly normal. He is also troubled with frequent colds in the nose and throat, and with attacks of catarrhal deafness in summer as well as in winter. General health, good. Treatment consisted in dry rubbing of the skin with a coarse towel night and morning. No local or other treatment. Entirely relieved at the end of several weeks. Four years later, he reports no return of the catarrhal symptoms. He still keeps up the dry rubbing twice daily.

Conclusions.—1. Chronic inflammation of the mucous membrane of the eye, ear and nose, caused by infection, is curable by local treatment alone, when the general health is good.

2. When the cause is not infectious, general treatment is usually beneficial.

3. Severe forms of inflammation are often relieved by mild methods of treatment.

131 West Fifty-Sixth Street.

Clinical Reports.

Cases VII and VIII.*—Two Cases of Vacuoles of the Lens.—
Selected Cases from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

By JOHN DUNN, M. D., of Richmond, Va.

CASE VII.—*Vacuoles in a partly Cataractous Lens; complications, Neuro-retinitis; probable cause, Inherited Syphilis.*

Mr. R. R., aged 24, has had trouble with his eyes he knows not how long; but, of late, trouble has increased so as to alarm him. O. S.—Lens partly clouded; although

*The numbering of these cases refers to the order in which they are being selected for record.

not enough to obscure altogether red reflex, the cloudiness is too great to allow details of fundus to be made out. Viewed under a + 2 O D lens, the lens of the eye can be seen to contain numerous small bubbles, varying much in size. The bubbles begin just beneath the anterior capsule and are scattered throughout the whole lens, perhaps as far as the posterior capsule. These "bubbles" have no regularity of size, or of arrangement; in one area they are numerous; in another none, or very few. Vision, perception of light and outlines of large objects. O. D.— $\frac{1}{2}$ D myopia. V= $\frac{1}{3}$ with myopia corrected. Field of vision normal. Retinitis, as evidenced by presence of numerous, small, yellowish patches in the fundus; these evidences of inflammation are found chiefly in the lower half of the fundus, and in the neighborhood of the macula, though none are just at the macula. Vitreous clear. There are some evidences of a co-existing neuritis, the edges of the disk being slightly clouded, and there is also a hyperæmia of the veins. Patient suffers no pain in the eye. Heart and lungs, normal. Urine, neither sugar nor albumen. Family history points to specific trouble as an inheritance. Under mercurial inunctions Mr. R. gained ten pounds in about a month. Later, iodine in iron and potash combinations were given; then strychnine. No visible change had been obtained in the condition of the eyes, when Mr. R. left for the West about three months after he was first seen.

CASE VIII.—*Central Vacuole of the Lens. No complications.*

Miss P., aged 41, complains of inability to read for any length of time without pain, and that luminous objects, e. g. candle, gas flame, etc., when viewed with the right eye are surrounded by thousands of rays of light which proceed from the flame as a centre. She does not see distinctly colored rings around a flame. O. S. V with— $\frac{1}{2}$ D ax. $135^{\circ} = \frac{1}{3}$. O. D.— $\frac{1}{2}$ D ax. $180^{\circ} = \frac{1}{3}$. Tension normal. Media clear. No trouble in the fundus. Exactly in the centre of the lens of the eye, when viewed under a + 167 to + 20 D spherical lens, can be seen a distinct bubble; under the magnifying lens this bubble appears to be about the size of the head of a pin. Apparently the bubble is perfectly round; and is certainly the cause of the diffusion of the light emanating from small luminous objects. Miss P. reads well with this eye. Except for this small bubble, the lens is perfectly transparent. Patient's general health is excellent.

In the literature at my command, I can find only one

reference to these bubbles in the lens, and that is a review of an article by Hirschberg, in the *Centralbl. f. Augenheilk.* Vol. XII., p. 361. The reviewer (Werner) says: "Hirschberg calls attention to the formation of drops, which appear either singly or in groups behind the anterior capsule of the lens, and may frequently be observed with the aid of a lens in incipient cataracts of old diabetics; also in healthy people, and in cases of retinal cataract."

The above two cases are the only ones I have seen within the past three years.

As to the origin of these "drops" in lens I know nothing definite. It is not impossible that section of the lens would show these "drops" to be vacuoles; that is, empty bubbles in the lens, the result of absorption of small parts of the lens. As to the cause of this absorption, I have nothing to offer. Localized inflammation, localized degeneration, faulty development, etc.; these mean nothing unless something more definite be known about them. The position of the bubbles need not be confined to the region just posterior to the anterior capsule; they may occur anywhere in the lens. Neither of these cases was diabetic. One had retinal cataract.

Dermoid Cyst of Ovary — Penis, Testicles and Teeth—A Queer Tumor.

By STUART MCGUIRE, M. D., of Richmond, Va.

ASSISTANT SURGEON ST. LUKE'S HOME FOR THE SICK.

Miss —, age 35, was brought to St. Luke's Home early in last April by her physician, Dr. John A. Davis, of Prospect, Va. He had attended her through a severe attack of malarial fever the preceding September, from which she made a slow recovery. The following November he was again sent for, and then noticed for the first time an enlargement in her abdomen. The enlargement gradually increased, and when she came to the hospital she was almost as large as a woman at full term, and her general health and strength very much impaired.

On April 11th, Dr. Hunter McGuire operated on her, and

removed what subsequently proved to be a dermoid cyst of the ovary. The operation was exceedingly difficult, as the adhesions were numerous, large and vascular. The cyst contained about two gallons of a yellow, ill-smelling fluid, strongly resembling pus, floating in which was a large mass of hair. The interior of the cyst was smooth, except at one point, where there was a patch of curious tissue about the size of the palm of a man's hand. Growing from this area was a penis and pair of testicles, and just beneath them were three large teeth firmly imbedded in gums.

The penis, one and three-quarters of an inch long and three-quarters of an inch in diameter, was well formed, and its base surrounded by a growth of hair. The testicles were proportionate in size and natural in appearance. The teeth were so well developed that it was evident one was an incisor and the other two bicuspid.

The specimen was so remarkable that I exhibited it at a recent meeting of the Richmond Academy of Medicine and Surgery.

The patient had no bad symptoms, and made a speedy recovery.

Case of Maternal (or Paternal?) Impression.

By R. A. LANCASTER, M. D., of Gainesville, Fla.

EX-PRESIDENT FLORIDA MEDICAL SOCIETY, ETC.

We hear and read often of "maternal impressions," but I will relate a case which I think might more properly be called paternal impression.

Mr. O. D. M. received a pistol-shot wound in the neck, near the base of the skull, which came near proving fatal. He finally recovered, however, except that there remains a partial paralysis of the right side—so much so that there is considerable impairment of motion in both hand and foot of the right side. In walking, there is a peculiar dragging of the foot, which is quite noticeable.

Some years after the accident he was married, and in due course of time a fine, healthy boy was born to them. The mother, who is a very intelligent lady, confesses that she had some misgivings lest the babe might have its father's acquired deformity, which happily was not the case.

A second boy was born to them about two years later, and this also was a perfectly formed child.

After this the mother gave no further thought to the idea of the father's condition impressing itself upon their offspring. About two and a half years later a third son was born, and to the surprise of all, and to none more than to the mother, for she had not given the possibility a thought in this case—he was the exact reproduction of the father—the right leg and arm being somewhat drawn and wasted. The child is now eight years old, and his walk and every motion is precisely like his father's, and no treatment seems to benefit him in the least.

Tell us, Mr. Editor, how this was brought about.

Proceedings of Societies, Boards, etc.

NEW YORK ACADEMY OF MEDICINE—SECTION IN PEDIATRICS.

Stated meeting May 12th, 1892. W. P. Northrup, M. D.,
Chairman.

A Case of Ranula

Was presented by Dr. J. Lewis Smith. The child was twenty months old, and the ranula was noticed soon after birth. It did not interfere with nursing, but was beginning to produce a deformity, causing the mouth to be open, giving the characteristic frog-like expression. The child did not talk, although of ordinary intelligence. Development was somewhat retarded, and for three months there had been no increase in weight. The tumor was double, occupying both sides of the frenum, and apparently very vascular. Large vessels could be seen radiating over the surface. Two operations were available. One consisted in passing a silver wire around and through the mass, so as to obliterate it by causing inflammation. The other was excision of a portion of the growth, but, owing to its extreme vascularity, serious hæmorrhage was to be feared.

Dr. S. Baruch thought the danger of hæmorrhage was not great, and favored the excision of two-thirds of the mass.

A Case of Microcephalus

Was presented by Dr. Henry Koplik. The patient was four months of age, and was the sixth child. The head was very small. The anterior fontanelle was open, but the sutures were closed. There was distinct left facial paralysis, and, upon touching the lower jaw, it moved with a spasmodic jerk. The legs were deformed from lack of development of the peronei muscles. The reflexes were increased, and there was also spastic contraction of the fingers. Nystagmus was observed, but was not constant, appearing only when the child looked toward the left. The probable condition present was microcephalus, with congenital retarded development of the cerebrum, with involvement of the pyramidal tracts. The question of a Lannelongue operation was a very important one. The speaker believed that the nervous symptoms indicated lack of brain development, and that nothing would be gained by operating on the skull.

Dr. W. M. Leszynsky believed that the Lannelongue operation was a very serious one. He had recently seen two fatal cases. In the present case, he did not believe that an operation upon the skull would aid the brain, which was evidently an undeveloped one.

SUMMER DIARRHŒA IN CHILDREN UNDER TWO YEARS
Was the subject of discussion. The first paper, entitled

Relation of the Stools to the Lesions and to Prognosis—Nervous Symptoms and their Origin,

Was read by Dr. Henry D. Chapin. When the disease is located in the two extremities of the alimentary canal, the stomach and the lower segment of the large intestine, the discharge will quite surely locate for us the seat of trouble. In the intermediate tract, however, it is usually difficult to judge, with certainty, either the extent or location of the lesion by the character of the stools. A classification that can be made only upon post-mortem examination is of but little value clinically.

The following is a fair clinical classification, and includes the vast majority of our cases:

1. The diarrhœa of acute indigestion.
2. The diarrhœa of inflammation.
3. The diarrhœa of chronic indigestion or atrophy.

In the first, the stools consist of their fæcal matter soon becoming thin and watery, and containing particles of undigested matter, consisting chiefly of lumps of fat and un-

digested caseine. If these undigested masses continue to be passed, the stools soon contain more or less thin mucus. If starchy food has been given, it may be passed unchanged in appearance. In general, the passages in acute indigestion consist of undigested and fermenting food and the products of an irritated mucous membrane.

There is a point where irritation, if unchecked, becomes inflammation, and the *second form* of diarrhœa is developed. It is difficult here, as in other places, to always distinguish that point. When well-developed, the temperature will remain elevated. The passages, if milk is the food, will contain masses of fat and lumps of curd. If milk is stopped, and meat-broths are given, the passages usually become darker colored, and contain very offensive feculent matter. Mucus, in various conditions, soon becomes a prominent element. If colored with bile pigment, it is an indication of jejunal or iliac catarrh, and is usually accompanied by undigested food. The closer the mixture of the mucus with the fecal masses, the nearer is the lesion to the cæcum. When the lower colon is most involved, the mucus will be more distinct, passing in glairy masses, or sometimes in pulpy, shreddy particles, presenting the appearance of false membrane. Blood, if mixed in streaks, comes from the ileum or upper colon; if free and red, from the lower colon or rectum.

White, dryish, putty-like stools, consist principally of fermenting fat; brownish stools of albuminous matter from animal broths, frequently very offensive from advanced decomposition. The yellowish, watery stools, are simply the ordinary fecal discharges diluted. The causation of green stools has been a subject of much controversy. However caused, they are clinically noticed in connection with much irritation of the bowels, with active fermentation of their contents,

The presence or absence of ulceration cannot be determined with certainty from the character of the passages, but when there is rapid loss of vitality, out of proportion to the number and character of the stools, ulceration is to be suspected.

The most persistent form of diarrhœa, and most difficult to treat, is that resulting from chronic indigestion and atrophy. Putty-like stools alternate with green mucus or brownish offensive discharges. Assimilation becomes more and more defective, and the child dies from exhaustion. The

underlying trouble is defective vitality—not inflammation; and antiseptics and astringents are useless.

The nervous symptoms accompanying summer diarrhœa are numerous, and often serious. Impoverished blood passing sluggishly through the brain will account for some of them. It is probable, however, that, as a rule, these symptoms are due to irritation produced by toxæmia. Such toxæmia may be caused by the absorption of ptomaines resulting from fermentation in the bowel. The brain symptoms thus produced often disappear upon thoroughly clearing the bowel.

Uræmic poisoning is also responsible, in some cases, for brain symptoms and death.

Conditions Indicating Change of Air and Baths in the Summer Diarrhœa of Children

Was the subject of a paper by Dr. Simon Baruch. The removal of the cause of disease being the chief aim of modern therapy, the insanitary conditions which actively contribute to the development and maintenance of summer diarrhœa becomes an important element.

A change of air is not demanded by reason of any special difference in the proportion of oxygen or other chemical constituent, but rather to avoid two sources of error:

1. A high temperature and marked humidity—one or both.

2. The presence of impurities.

Whenever treatment seems unavailing and prostration and intermitting fever are present, the question of a change of air becomes important. Of what avail are stimulants, tonics and food, when the little sufferer is forced to toss under the constant oppression of a stifling atmosphere, especially if there be also an excess of moisture? Rich and poor alike are crushed under this terrible combination. Removal by a rapid and comfortable journey to a high attitude or to the sea-shore, free from these prejudicial conditions, becomes imperative in many cases. The change in the entire aspect of the case is too well understood to need comment.

Among the well-to-do classes, atmospheric impurities are rarely operative in summer, though imperfect ventilation often breeds them in winter. In the tenement districts of large cities, however, this is an active factor. In these noisome tenements, in which the children of the poor and many even of the better class of working people are huddled

dled together, the elements which contribute to the development and maintenance of summer diarrhœa find an excellent place for their culture and propagation. The elements demanded in the prevention of this disorder are clean food taken into a clean stomach, and its detritus removed through a clean intestinal tract. It is to obtain these conditions—not more oxygen—that a change of air is demanded. The work carried on by the St. John's Guild is deserving of the utmost commendation. To the poor, this change from the filth-laden atmosphere of the city to the pure breezes of the harbor comes as a refreshing and vivifying blessing that cannot be overestimated.

One point in this connection must be noticed. While of the utmost importance in the tenement districts, it is not always so important where the conditions are more favorable for home treatment. The change from a comfortable home to a country hotel, often overcrowded, is not to be advised without careful reflection. The benefits accruing to the little patient do not always warrant the expense, anxiety and disturbance of the family, resulting from a sudden removal of a child without due preparation when the symptoms become alarming. The advantages and disadvantages should be carefully considered. We should see that the milk is sterilized, that the colon has been irrigated, and that all measures have been tried before advising a change.

The lessons derived from a long experience at a summer resort are two:

1. While all cases of summer diarrhœa of infants living in crowded homes demand change of air, treatment is, at least, equally important.

2. Among the better situated, change of air need not be insisted upon until all approved methods of treatment have been fairly tried.

Bathing for cleanliness is always demanded in summer diarrhœa, both for the purpose of cleanliness and by maintaining the functions of the skin to relieve intestinal congestion. For therapeutic purposes baths are especially indicated in acute cholera infantum, for they offer more positive relief and contribute more to cure than all other measures. In this condition we find hyper-pyrexia, though the extremities and face may feel cold and clammy.

Whenever the temperature exceeds 102° F., a cooling procedure is indicated, and it is important that the proper method of bathing be observed. The child should be placed at full length in a tub of water at 90°, after the face

and head have been bathed with ice water. Gentle friction should be constantly applied while some one is removing with a pitcher the tepid water and replacing it with ice water. The temperature of the water is thus gradually lowered to 80° . If cerebral symptoms are present, water at 60° should be poured over the head and shoulders. The bath with friction should be continued fifteen minutes, unless cyanosis of the face or decided shivering appears. The latter is prevented by active friction.

After the bath the child is placed upon a linen sheet laid smoothly over a blanket. If the temperature before the bath was $103^{\circ}.5^{\circ}$ or over, it should be wrapped and allowed to dry; if under that, it should be dried and the clothing replaced at once. It should be understood that the object of the bath is not primarily to reduce temperature, although this is an important incidental result. We have here a vaso-motor paralysis as evinced by the pallor of the skin when the rectal temperature is high. This condition is counteracted by the bath and frictions as described. The effect of a skilfully administered bath in such conditions of nerve prostration must be seen to be appreciated.

In the subacute forms of summer diarrhœa, the chief condition indicating baths is the general depreciation of the system arising from the great drain upon the blood and nerve tone. We here have the symptoms of chronic adynamia. To stimulate the appetite and improve the general nerve tone should be our endeavor. The most approved tonics often fail. In these cases general ablutions morning and evening are preferable to baths. The child is placed on a soft woollen blanket, and the abdomen, chest and back are rapidly bathed—not sponged—as follows: From the hollow of the hand water at 70° F. is poured upon the skin, which is then gently rubbed with the same hand. The body is rapidly dried, and friction with a rough towel is employed, if the temperature is below 99.5° . If the temperature is above 102° , a general bath is indicated.

The Use of Drugs in Diarrhœa; Indications for Alkalies, Acids, Astringents, and Opiates.

Dr. J. Milton Mabbott read a paper upon this subject. Much clinical and experimental effort has been expended in recent years upon that much vaunted class of drugs, the antiseptics and antizymotics. It was early inferred that it would be difficult to find an antiseptic capable of internal administration in doses sufficient to kill microbes without

proving poisonous to the patient. Baruch, five years ago, referred to the large quantity of an antiseptic necessary to sterilize so extensive a surface, and Vaughan showed the feeble inhibitory power upon the tyrotoxin producing germ of all the antiseptic drugs. Holt has pointed out, that by reason of absorption, the soluble antiseptics cannot reach the lower bowel where the chief trouble lies. But insoluble drugs in a fluid menstrum have very weak antiseptic power. It is probable that the action of bismuth is due more to its astringent and soothing properties than to its antiseptic powers. It seems impossible at present to administer antizymotic drugs by the mouth in such a way as to influence materially the small and large intestine. We are obliged to admit that they have been tried and found wanting.

Nevertheless, the bacterial studies of the disease, especially those of Booker, have taught us to secure asepsis where we cannot apply antiseptics. They have also made clear the *rationale* of certain drugs, especially cathartics.

Stimulants, though locally undesirable, are at times necessary, and sedatives may be required to relieve pain.

Until recently there seems to have been general consent to the administration of alkalies. But now that we endeavor to promote asepsis, and control fermentation by evacuant, dietary, and hygienic measures, they are certainly less important than formerly. They are usually given with or soon after feeding. When using pepsin, alkalies should be given midway between feedings.

The indications for acids are doubtful. Lactic acid as proposed by Hayem is advocated in (1) acute infectious diarrhœa, where the stools are numerous, watery, and often foul but yellow in color; and (2) in green bacillary diarrhœa, for which it is recommended as a specific. Numerous observers have found the reaction of the alimentary canal in healthy infants acid throughout, and Pfeiffer has shown that green stools are associated with alkalinity. Hence, the use of acids would seem to have a rational basis. The dilute mineral acids are commended by many, the dose being one to five drops administered twenty minutes after feeding. The vegetable astringents have, during the last few years, been almost discarded. The same is true, also, of mineral astringents, with a single exception. That exception is bismuth—the subnitrate being the preparation universally esteemed. It is prescribed in much larger doses than form-

erly, twenty grains every two hours sometimes being given to an infant.

Opiates are less used than formerly. It undoubtedly checks peristalsis. As peristalsis is increased in diarrhœa, this action is desirable after the bowels have been emptied of their objectionable contents, but highly dangerous before. The other indications for opium are the relief of restlessness, pain, and tenesmus, and the control of frequent watery passages. Ashby and Wright recommend it in the latter stages, if the passages continue small and numerous. Holt and Crandall always prescribe the opiate separately, so that it may be conveniently increased, diminished, or withheld at will for increasing fever, or if toxic symptoms call for its discontinuance. It should not be given when the passages are infrequent and of bad odor. A decrease in the number of stools while they become more offensive, contraindicate its use and demand evacuants. Relief of pain is one of the highest duties of the physician, and unless definitely contra-indicated, sufficient opium should be given to accomplish this.

Feeding, Sterilized Food, General Feeding

Was the subject of a paper by Dr. Henry Koplik. A number of cases were reported in detail which tended to show that while some infants taking an artificial food show no traces of sugar in the urine, there is a considerable proportion which do show this abnormal condition. On the other hand, infants taking rationally prepared milk or mother's milk showed no trace of sugar.

Although numerous theoretical reasons may be given against the use of sterilized milk, clinical experience proves that it is better tolerated by the stomach than any other artificial food. It has a peculiar taste, but infants soon develop a liking for it, and prefer it to other milk.

At the Good Samaritan Dispensary during the summer of 1891, milk was sterilized on a large scale. Six bottles containing four to five ounces of milk were given to each patient, the sum of eight cents being charged. In this way over 40,000 bottles were distributed to 575 different infants. The results were favorable in the extreme. The chief drawback was inability to control the milk before receiving it at the dispensary. Changes that have already taken place cannot be remedied by sterilizing. Milk that appears to be good when cold, will prove unfit for use when heated. Milk that is several days old may show no signs of change, but

when boiled will promptly curdle, owing to the formation of lactic and other acids. When sterilized it will appear flocculent, and should be rejected, as it is positively dangerous. It is almost impossible in New York to obtain milk less than twenty-four hours old, and much of what is used is several days old, and has been preserved by means of ice and chemicals.

To obviate certain changes which take place in milk sterilized at high temperature, an attempt has been made to destroy the activity of the germs by subjecting it to a lower temperature.

In Boston, Dr. Rotch has accomplished this at a temperature of 167° F., but the milk used is unusually fresh and pure. Another method recently proposed is that of bringing the milk quickly to the boiling point and then placing it at once in a cool place. While milk thus treated keeps much longer than ordinary milk, it should be distinctly understood that it is not sterilized.

Resterilization, by repeatedly subjecting milk to a high temperature, is not to be commended. Milk is a very complex fluid, and every disturbance of its elements renders it less desirable as a food. Our aim should be to produce as little change as possible. If, therefore, it can be rendered safe by heating to a less degree, it should be done. This process of heating milk to a temperature of 167° F., and cooling it quickly, is now known as Pasteurization. It does not actually sterilize the milk, but renders inactive certain ptomaine-producing germs. Such milk will keep several days, and at this temperature it is but little if any changed in its constituents; it presents an improvement over the older form of sterilized milk.

Dr. J. Lewis Smith asked Dr. Koplik how long he would subject the milk to heat in the process of sterilization? Before sterilized milk was known, he had been in the habit of directing the milk for the child to be subjected to the heat of boiling water for two hours, but now advises but twenty minutes.

Dr. Koplik replied that after twenty or thirty minutes, when the Arnold sterilizer is used, the hood could be removed.

The chairman referred to the formula proposed by Dr. Blackader at the recent meeting of the American Pediatric Society, the Arnold apparatus being used; a pint of water, a Bunsen burner, and fifteen minutes. The hood may then

be removed and the cover left ajar. This is effectual for Pasteurization.

Dr. A Jacobi objected to the statement that he has written extensively on infant's foods "pro and con." He had never written anything in their favor, but had always opposed their use. Sterilized milk was an improvement upon the methods he had formerly adopted. It was a great error to suppose that sterilized milk was anything like cow's milk. It required just as much modification as though it were not sterilized. A good food was not one that was simply tolerated—one upon which a child did not die—but rather one upon which he would thrive. Many an invalid owes his ill health in later life to improper feeding in infancy.

Alkalinity in cow's milk was always suspicious—for it was evidence that it had been "doctored." The most dangerous alkali was bicarbonate of soda, for in milk thus treated the ptomaine producing germs develop best.

While pepsin was sometimes useful, the speaker objected to its indiscriminate use. Without an acid it was inert. The best remedy referred to during the evening was irrigation of the colon. Not only did it remove decomposing matter, but furnished fluid which was so much needed, for some is absorbed.

Dr. S. Baruch said he had not prescribed pepsin without acid for ten years, and had not administered it to children for five years.

Dr. Jacobi said still further that sugar was required in artificial food, but he did not believe that milk sugar was best. There was a close relationship between milk sugar and lactic acid. The change from one to the other was very rapid. Some lactic acid was necessary for proper digestion, but an over quantity produced hyper-acidity and indigestion.

"In regard to your preparation, the *Three Chlorides*, I am glad that I can conscientiously and heartily endorse it. As an 'Alterative Tonic' the combination is a most happy one." So writes W. Taylor Edmunds, M. D.

Peacock's Bromides.—I do not know of anything that would take its place in nervous conditions.—J. T. Kilburn, M. D., Trufant, Mich.

*Analyses, Selections, etc.***The Mitchell-Ward Case.***

Dr. A. B. Holder, of Memphis, Tenn., "writes up" this case medically for the *Medical Fortnightly*, May 15th, 1892, which we copy entire. At four o'clock in the afternoon, January 25th, a young woman was brought to our office in an express wagon with her throat cut, and, having bled past assistance, in a few minutes was dead. Such a sight is shocking, but by no means unusual. Yet unique in the history of crime, became the event, in the light of the facts as they were related by the sister of the victim, brought in a few minutes later for treatment of a less severe injury at the same hand, and by other witnesses at the trial of Miss Mitchell's companion.

The facts were about these: A nineteen-year old girl of excellent family, excellent associations, the best school, church and social advantages, on a bright afternoon, on a public street, awaits and follows another girl of excellent name and social standing, and, seizing her from behind, cuts at her throat with a razor; on being interrupted, she slashes at the girl's sister interrupting her, causing a slight neck wound; again seizes her victim, now down, and repeats the cuts with the razor till there are four gashes on the face and two on the throat, causing rapid death; then she returns to her home in the buggy in which she came.

The girl had secured the razor from her father's case some hours before for this use, had driven in her buggy with a young lady friend, several times past the house where her victim visited, knowing that this was her evening of departure from the city; had awaited her coming forth, and, driving slowly, had followed her eight or nine blocks, had then passed and gotten out upon the sidewalk, stood while the victim went by and directly made the attack as related.

The two girls and their families had been friends for years. Alice Mitchell had visited Freda Ward and her sister at their home above Memphis, and Freda Ward and her

[*At the request of my friend, *The Fortnightly's* editor, I submit such facts as are known, having a medical or medico-legal bearing in the above celebrated case. If additional important facts are developed in the trial, they, with a collection of similar cases, will form the material of a later paper.]

sister had usually visited at the Mitchell home when in Memphis.

A few months ago the intimacy between Alice and Freda had been broken at the instance of Freda's eldest sister, who stood in loco parentis. For reasons which she thought sufficient to justify so severe a course, this sister had instructed Freda to return to Miss Mitchell all tokens received from her, not to write again to her, not to visit her while in Memphis, nor even to recognize her on the street, less further association should follow. These instructions the unfortunate girl obeyed, with one exception to be related later, even passing Miss Mitchell without recognition a few minutes before the tragedy. It is this intimacy and its fatal ending that stirs the interest of the medical profession. It was not such as usually exists between school-girls. One of the reasons assigned by Mrs. Volkmar for ending it was that the intimacy was "abnormal." Alice Mitchell frequently spoke of and to Freda Ward in peculiar, endearing terms, asserting that she could not live without her. As Freda passed a few minutes before the killing, Miss Mitchell said to her companion, Miss Johnson, "Fred Ward winked at me. I am going down to the corner to have one more look at her, and tell her good-by;" and when she hurried back from the bloody work, she cried, "I have cut Fred's throat. I do not know whether I killed her or not, but I loved her so I couldn't help it;" and when her friend called her attention to the blood on her face, she said, "Don't wipe it off, it is Fred's blood, and you know how I loved her."

In letters and conversation, Miss Mitchell constantly referred to Miss Freda as her *sweetheart* or *wife*. One of the tokens returned by Miss Ward was a ring frequently referred to as an *engagement ring*.

By the testimony of the sister, Jo Ward, in the trial of Miss Johnson, Freda, in August, packed a valise and dressed to come to Memphis to marry Alice Mitchell, and go to St. Louis; Alice Mitchell was to be the *man*, Freda to be the *wife*; Alice Mitchell to be called Alvin G. Ward, Freda to be called Mrs. Alvin G. Ward. Their plan was discovered and thwarted by intercepting their correspondence.

The attitude of Freda Ward as to that affair, and her feeling toward Miss Mitchell after the interference of the family, may be inferred from a note from Freda to Alice written a week before the tragedy. From this note, taken with Miss Mitchell's words just before and just after the killing, may also be fairly inferred Miss Mitchell's feelings toward Miss

Ward about the time of that event. The writing of this note was the one disobedience by Miss Freda to her sister's instruction of non-intercourse. In the letter she says: "I love you now and always will, but I have been forbidden to speak to you, and I have to obey; you say I am as much to blame as you are. If I have done you any harm, or caused you any trouble, I humbly beg your pardon. No one knows about that last summer's business but our family; that is unless you told some one. We go back to Gold Dust this evening." FRED."

The return was postponed, and again set for the 25th. There is a newspaper statement, apparently well founded, that on a visit to Cincinnati, Miss Mitchell "in various ways made (masculine) love" to a young lady there. She would hug and kiss the girl and say, "wouldn't you prefer me to a man for a husband?"

On the facts as stated above is based a popular theory of sexual perversion. The only lips that could with certainty confirm this theory are closed—Miss Ward's in death, Miss Mitchell's by the counsel of her attorneys. No statement bearing on this has yet been uttered by Miss Mitchell or her family. No examination of Miss Mitchell has been allowed.

It is somewhat amusing, the naiveté with which, in letters, medical men from abroad have asked has Miss Mitchell this or that sexual malformation, forgetting that Miss Mitchell, though now a prisoner, is of a refined, wealthy family, and that no trial of Miss Mitchell, even preliminary, has yet taken place.

The sexual passion is among the most powerful that sway human actions. Restrained, it gives a charm to life that perhaps the angels lack; unchecked and perverted, it makes a hell that Satan would envy. Sexual perversion is so unclean a subject that the right-minded man would turn from it, were it not that, for its treatment, and better, for its prevention, it behooves him to stir its unclean depths.

Sexual perversions are sadly common, but fortunately it is chiefly in the male that they are found, well-known forms being masturbation, pederasty, and that form still more despicable, practiced by the Boté, whom I described in the *New York Medical Journal* of December 7th, 1889. But to the sexual infatuation of one woman for another, our attention has been but little drawn—I trust from its rareness. Yet that there is such an infatuation, there are abundant examples; intimacies in which the women, one active, the other passive, succeed by some methods in exciting the sex-

ual orgasm in one another. By some such perversion might be explained the fearful infatuation of such a case as Miss Mitchell's. Whether or not such a perversion does exist, its relation to insanity as cause or effect, and the relation of both to the fearful tragedy, are matters upon which light may be thrown in the trial; which trial, for the public good, it might be devoutly wished could take place without such publicity of details as shall gratify the purient curiosity of men and women.

Meanwhile, it may be remembered—

1. That an infatuation leading to homicide is not of necessity sexual. As, observe the infatuation which leads the insane mother to murder her own children under some delusion.

2. That sexual perversion does not of necessity require sexual malformation; as in pederasty, where both parties are often perfectly-formed males, or in the case of the Boté, who is without physical sexual defect. "It seems certain that a feminine functioning brain can occupy a male body, and vice versa." (Kiernan.)

3. That sexual perversion may be a cause of insanity, such insanity being often "the ultimate wreck of a life ill-guided, directed chiefly by caprice and passion, and weakened by indulgence." (Folsom.)

4. That sexual perversion may be a result and evidence rather than a cause of insanity, and then merits our deepest consideration and pity. (Hammond.)

5. That sexual perversion alone does not of necessity establish insanity. (Spitzka, Krafft-Ebing, Tarnowsky, Kiernan.)

6. That if a mind be insane on this point it is not, as a rule, insane on this point only. In a monomaniac, usually all the mental faculties are more or less affected, but the affection is more strikingly manifested in some of these than in others. (Lord Lydhurst Prichard, Taylor.)

Glycerin in Hepatic Colic.

M. Ferrand concludes as follows: Glycerin given by the mouth is a powerful cholagogue and a valuable agent in hepatic colic. In large doses (3v to 3j) it determines the end of the crisis. In small doses (gtt. lxxv to 3ss) the glycerin, taken each day in a little alkaline water, prevents new attacks. Glycerin, without being a lithontriptic, is yet an excellent medicine in biliary lithiasis.—*N. Y. Med. Abstract*, April, 1892.

Treatment of Piles and Allied Affections.

Dr. T. Lauder Brunton (*Brit. Med. Jour.*, March 12th), says: First, keep the liver in condition to maintain a free supply of blood through it. For this purpose, insist on moderation where either food or stimulants are taken in excess. Occasional small mercurial purgatives, followed by a mild saline, tend to keep the liver free and to prevent piles, although one may not know the *modus operandi*. If the saline be too violent, it will tend to cause local congestion, and make matters worse. Aloes have an irritant action upon piles, but their effect depends upon the quantity given. While a large dose will almost certainly produce rectal irritation, small doses (such as one-tenth grain of aloin three times a day with each meal) tend to lessen piles by keeping up gentle peristaltic action and preventing constipation. Mr. Archer used, with invariable success, half an ounce of castor oil, followed by half a drachm every morning for a month. When portal congestion has occurred a useful application is a hot-water India-rubber bag, with a plush or flannel covering, put under the back of the neck, and a similar one over the liver. These tend to restore the equilibrium of the circulation and lessen portal congestion.

Exercise is useful in keeping the liver free, but this exercise must be of a certain kind. The liver is a very spongy organ; the blood pressure within it is very low, and the pressure under which bile is secreted is also very low. Both blood and bile, therefore, tend to stagnate within it, but this stagnation is lessened by the liver being rhythmically squeezed, more or less forcibly, between the diaphragm and abdominal muscles. In standing or sitting upright, or lying on either side, this squeezing action is very slight; in a supine posture it is slightly greater. In ordinary walking it is also very slight, but in walking up a hill, and especially in climbing a mountain, the amount of pressure to which the liver is subject is considerable, because the muscles of the abdomen in such exercise are actively contracting, and the movements of the diaphragm during the panting breathing, which occurs on exertion, are much greater than when a person is quiet. A similar process of squeezing occurs in brisk horse exercise, either trotting or cantering, and thus riding is frequently beneficial for piles, notwithstanding the increased local irritation from contact with the saddle. Another useful exercise is to touch the toes with the fingers, keeping the knees straight, several times every morning.

A regular action of the bowels is of the utmost importance in preventing piles, because it tends to keep the circulation through the liver free and prevents straining. A teaspoonful of compound liquorice powder at night, or confection of senna alone, or with confection of sulphur and confection of pepper, are amongst the most widely employed laxatives. The best time, ordinarily, for emptying the bowels is after breakfast, but if the piles tend to come down much it is better to empty the bowels every night before going to bed, so as to secure rest in a recumbent position for several hours. Some in whom piles come down easily spend a day of misery if they go to the closet in the morning instead of evening, because the piles tend to remain down all day.

The soft papers now common are a great improvement upon newspapers, but even they sometimes give rise to irritation. Where piles are very troublesome, it is always well to wash the anus immediately after a motion. Let the patient carry with him to the closet a soft sponge in a small India-rubber bag; an ordinary tobacco pouch is best. Take the sponge full of water, and, after cleansing the anus gently with paper, he may thoroughly sponge. The anus may then be dried either with porous paper or with a small napkin. The patient should also take with him a small bottle of some preparation of hamamelis and some prepared sheep's wool deprived of its fat, and not cotton wool. This wool is quite absorbent, and differs from the cotton wool in one important particular, for it forms a kind of felt, which the cotton does not. A small pledget of the wool about the size of hazel nut should be dipped in the hamamelis and introduced within the anus, and a similar pledget, likewise soaked in the hamamelis, should be introduced so far within the anus that a few fibres of it at least are caught by the sphincter. The external pledget soon becomes felted together into a regular pad, fitting completely to the anus, and is retained by the few fibres caught by the sphincter for twenty-four hours, while a similar pad of wool might not remain as many minutes. The wool pad not only keeps the hamamelis in constant contact with the piles, but also affords a certain amount of mechanical support. In patients suffering from piles we frequently notice an almost involuntary tendency to sit on the corner of a table or on the arm of a chair, or to put the hand behind and press upon the anus from time to time; but the woollen pad, by affording constant support, lessens the necessity for pressure in

any of these ways. Where the piles are chiefly internal, the hamamelis may be applied in the dose of half a drachm to a drachm, either diluted with water or sometimes undiluted, by injecting it within the anus by means of a glycerin syringe. The success of this treatment in stopping hæmorrhage from piles is really extraordinary; within a week he has stopped hæmorrhage which was so profuse that a colleague thought an operation necessary. But not only does hamamelis stop hæmorrhage; it lessens the uncomfortable weight and aching pain which frequently accompanies piles, especially when they do not bleed; and it will even greatly lessen or remove the pain which occurs in piles when they become inflamed. He has not found either the officinal tincture or the local extract nearly so satisfactory as some of the proprietary preparations. A lady was seized with a sharp attack of piles. He hastily wrote a prescription for hamamelis, and gave it to the maid with instructions how to apply it. On going to the lady two hours afterwards, he found that she had used the whole bottle, with no relief whatever; but the piles were internal, and the hamamelis had only been used externally. So satisfactory has he found hamamelis, that he does not often now employ ointments.

In obstinate cases great relief is afforded by the India-rubber anal pad, with elastic straps to hold it in place; but it does not give quite the same relief as one in which the pad is pressed against the anus by a spring attached to a metal girdle which passes round the loins.

Other affections which frequently go along with piles, and are most annoying, namely, pruritus and eczema round the anus, may be lessened by a simple remedy—eau de cologne applied to the itching surface with a small sponge or a pad of cotton wool. If the skin be tender, undiluted eau de cologne gives rise to intense burning pain, but this may be prevented by diluting the spirit before application. The diluted spirit does not have such a strong and permanent action in lessening the itching as the pure spirit, and, where the itching is at all great, the pure spirit may be used, notwithstanding the pain it causes, for it converts the intolerable itching into a severe smart, and this may be relieved by diligently fanning the part till the spirit evaporates.

Treatment of Ingrowing Toe-nail.

Dr. Puerckhauer recommends a novel and simple, and, at the same time, competent treatment for ingrown toe-nail: A forty per cent. solution of potassium is applied warm to

the portion of the nail to be removed. After a few seconds the uppermost layer of the nail will be so soft that it can be scraped off with a piece of sharp edged glass; the next layer is then moistened with the same solution and scraped off; this must be repeated until the remaining portion is as thin as a piece of paper, when it is seized with a pincette and lifted from the underlying soft parts and severed from the other half. The operation does not require more than half an hour's time, is painless and bloodless, while the patient is delivered from his suffering without being disabled even for an hour.—*N. Y. Med. Times, May, 1892.*

Treatment of Alcoholism.

We have heard much upon this subject, and more especially of late, a sort of wave having swept over the country in connection with the subject. A well-known physician, who desires his name to be withheld for the present, has originated a method, which appears to have met with quite an extraordinary amount of success, and which is essentially as follows, the name he gives it being Cincho-Lupli:

R_x—Strychniæ nitrat..... gr. $\frac{1}{4}$
 Ext. fl. piscidiæ erythrin..... ʒij
 Ext. fl. cinchon. rub.....
 Ext. fl. humuli..... ʒijss
 Ext. fl. jalapæ
 Ext. fl. cannabis Indic..... āā ʒij
 Ext. fl. digitalis..... ℥ xl
 Aromatics. q. s. ad ʒviiij

M.—Sig. A dessertspoonful thrice daily before meals.

This has succeeded in curing cases in which the Dwight method failed. However, if this fails, the following should be injected once a day hypodermically in addition to the above:

R_y—Atropin. sulphat..... gr. $\frac{1}{100}$
 Strychniæ nitratis..... gr. $\frac{1}{100}$ ad gr. $\frac{1}{50}$ —M.

This has been made in the form of tablets which will readily dissolve.

This method has been used with complete success by a number of physicians, and they have found that, as a general rule, the preparation to be used per os is amply sufficient to procure good results, and not only this, but results that are lasting; and, most important of all, a safe issue is certain in each case. There are no cases of insanity, sudden death, or other untoward effects, such as have been filling the news columns of our newspapers since the bichloride cure became a craze.—*Med. Rev., April 16, 1892.*

Value of Antipyrine in Ophthalmo-Therapeutics.

Dr. B. Wicherkiewicz, of Posen, Austria, in a revised paper (in *Amer. Jour. Ophthal.*, March, 1892, as translated and annotated by Dr. A. Alt, of St. Louis,) on antipyrine in ophthalmology, states that he had not found distinct mention of the antiseptic power of antipyrine, although Demroth suggested that the apyresis brought about by antipyrine is due simply to its anti-parasitic property. In proof, after ingestion of antipyrine, the temperature decreases *before* the sweating comes on; and consequently this decrease cannot be due solely to the sweating. According to C. Engel, the anti-bacterial effect of antipyrine is much less than that of salicylic acid and quinine. But never before 1890, so far as the author knows, had the remedy been used *locally as an antiseptic*. Bosse alone (1889) praised its effect on ulcers of the leg, which, he said, healed rapidly under the influence of antipyrine powdered on them.

Leaving aside its well-known values in medicine and surgery, its subcutaneous use in neuralgia of the trigeminus, as recommended by Germain-Sec, etc., Dr. W. relates a few less familiar cases, including the following one of Rampoldi (1889): A patient, blind for three years from total occlusion of the pupil and secondary glaucoma, had excessive pains, but did not consent to iridectomy till sympathetic ophthalmia attacked the fellow eye. Although the operation did not then relieve him, he would not allow the eye to be removed. After trying various other remedies in vain, Rampoldi gave three grammes of antipyrine daily. After the first two grammes, the pains and symptoms of *sympathetic ophthalmia began to lessen*, and in a short time a complete cure was accomplished. [These are larger doses than Americans generally consider safe or prudent.—EDITOR.]

Panas states that in a daily minimal dose of three grammes—in spite of a mixed diet—antipyrine diminishes the secretion of sugar in *diabetes with cataract*, and checks the development of the cataract.

Kacaurov used antipyrine in 29 cases—especially in neuralgia following different eye affections, after cataract extraction, in inflammation of the cornea, glaucoma, etc.

Grand-Clement of Lyon, in 1888, accidentally cured a *one-sided hemeralopia* with subcutaneous injections of antipyrine made in the temporal region. The hemeralopia was due to an insignificant retinitis caused by traumatic hepatitis, brought about by a fall from a horse four years previously, and which had been cured for three years. Grand-

Clement gave antipyrine to get rid of a disagreeable blepharospasm, and was greatly astonished when the hemeralopia improved after the first injection, and was perfectly cured in nine days by four injections, even before the blepharospasm had totally disappeared. In another communication he recommends antipyrine injections against blepharospasmus.

Chibret recommends subcutaneous injections of antipyrine with cocaine before making an enucleation, *to prevent serious hæmorrhage*. He injects 1 gram. of antipyrine, and 2 centigrammes cocaine, dissolved in 2 grammes water.

Hénoque and Huchard also consider antipyrine a hæmostatic. Although hæmorrhage after enucleation has never appeared to be serious, still the employment of antipyrine in the detailed manner may be of use in special cases, as, for instance, in evisceration of the orbit in which a clear view which is of especial importance is often obstructed by hæmorrhage; furthermore, in cases of optico-ciliary neurotomy since the hæmorrhage after this operation is very apt to produce exophthalmus. He has often had occasion to confirm the effects of antipyrine just spoken of.

He has given it internally or subcutaneously almost exclusively in cases of intense pain after superficial injuries to the cornea, in iridocyclitis, in blepharospasm, and in neuralgias of the trigeminus, which were so frequent as a sequel to influenza. Such injections must not be made close to a large nerve-branch, since they cause a long-continued pain, and often even a swelling, which lasts for weeks and disfigures the patient. This is especially the case if the solution is too strong (for instance, 100 per cent., as Germain-Sée recommends). Solutions of from 25 per cent. to 50 per cent. are sufficient.

In view of the well-known antipyretic, antiseptic, and antineuralgic effect of this remedy, he thought it possible to make use of these properties in oculo-therapeutics by applying it immediately to the diseased tissue. By clinical observation, he became convinced that we really have in antipyrine a remedy which may be used successfully in this manner, and which, in some instances, is very much superior to other well-known remedies.

He employs solutions of from 1 to 20 per cent., either pure or with a small quantity of bichloride of mercury. With strong solutions of the bichloride, antipyrine forms a white precipitate; with solutions of boracic acid, the pre-

precipitate is so thick that they cannot be employed at all. Sulphate of copper causes a greenish precipitate.

The results of Dr. W.'s experience, based on from 500 to 600 cases, may be summed up as follows:

Antipyrine has no astringent quality; it is, however, a very good antiseptic in acute as well as in chronic conjunctivitis, which are caused by an infection, and begin with considerable discharge. This discharge disappears in a short time under the application of antipyrine, but the inflammatory condition remains unchanged unless other remedies are at the same time employed against it.

In granular conjunctivitis, and especially in the process of softening of the granulations, antipyrine used in a 25 per cent. solution, two or three times a day, after the granules have been squeezed out, diminishes the profuse discharge, and alters the conjunctiva in such a manner that it is more easily influenced by other remedies. Aside from the diminution of the discharge, the swelling of the conjunctiva decreases slowly, and this membrane assumes its normal appearance.

Pannus of the cornea clears up rapidly or disappears altogether. The effect of antipyrine is less favorable in cases of acute granular conjunctivitis, and nitrate of silver is here decidedly to be preferred. In the beginning antipyrine may be used as an antiseptic, but when swelling, injection and discharge do not show any diminution, it is necessary to use astringents alone, or in conjunction with it.

In a number of instances, certain forms of conjunctivitis which remained totally indifferent to old and approved remedies, were influenced in the most favorable manner by our remedy. This was especially so with the conjunctivitis following influenza, which could often not bear any other remedy. It seems that antipyrine has an especial influence on the micro-organisms of influenza.

Antipyrine acted especially well in that rare form of conjunctival disease, the papillary trachoma, which is often overlooked, since it produces no very pronounced lesion. In making a superficial examination of such eyes, we often find nothing; with a magnifying glass, however, we see the real conditions. There is injection, and more or less swelling of the papillary body. These changes annoy the patient, and cause itching, pressure, continued pain, and especially an inability to do near work for any length of time, on account of a feeling of dryness and sleepiness. This conjunctival affection is doubtlessly a form of granular con-

junctivitis, which it precedes or follows. It is, however, quite often a separate form of disease. Its epidemic or endemic appearance shows the infectious nature. This disease uncommonly resists the usual remedies, and the patients are generally treated for months, and even years, with various remedies, which only increase their discomfort. The complex of symptoms, called *asthenopia nervosa*, is very often produced by this affection of the conjunctiva.

In this disease, a weak solution of antipyrine (from 3 to 5 per cent, where there is catarrhal discharge, combined with a $\frac{1}{3}$ to $\frac{1}{2}$ per cent. solution of sulphate of zinc,) has proven to be an excellent remedy. It must be instilled from one to three times a day.

Antipyrine is also very valuable in chronic blenorrhœa of the lachrymal sac. In three cases treated without any improvement by means of alum, zinc, sublimate, nitrate of silver, etc., injections of antipyrine brought about a speedy cure.

Later on, he injected a 25 per cent. solution once or twice a day, having cleaned the sac first by injecting a solution of boracic acid, and has found it perfectly satisfactory. Of course, the primary affection must be treated also.

In phlyctenular conjunctivitis, or strumous keratitis, antipyrine is ineffectual. Anyhow, we have a number of better remedies. In blepharitis marginalis and in internal eye affections, antipyrine used externally gave no appreciable results.

In *episcleritis* and *scleritis*, antipyrine sometimes not only allays the very disagreeable pain, but acts very favorably upon the swelling, and exerts some influence upon the accompanying dimness of the cornea. In these cases, he has used an ointment containing 10 per cent. of antipyrine.

Last year he saw an extremely favorable action of instillations of antipyrine (5 to 10 per cent.) in a case of *vernal conjunctivitis*. Other remedies were, however, used at the same time, but they never had such a good effect when used alone.

Antipyrine has shown itself useful also in *glaucoma*. In a man, 60 years of age, who had an iridectomy performed *secundem artem*, but unsuccessfully, on an eye suffering from hæmorrhagic glaucoma, he succeeded in removing the extreme tension and severe pain (other means having failed) by instilling twice daily a few drops of a 25 per cent. solution in the respective side of the nose while the head was

tilted backward. He has since seen a good effect in a number of cases of glaucoma treated in the same manner.

He has used antipyrine almost exclusively in solutions. These must be instilled into the eye when fresh, or after having been sterilized by boiling. Even a 2 per cent. solution causes a burning sensation, which is increased with the strength of the solution, and may become very painful. This disagreeable sensation, however, lasts but a short time, to give place to a rather agreeable feeling. For a short time, the visual acuity seems to be increased, as in his own case. His visual acuity (M. O. 5) of $\frac{6}{4}$ always increased to $\frac{6}{14}$ after the instillation of a 5 per cent. solution. Pupil and accommodation are in no way influenced, neither the normal sensitiveness of conjunctiva or cornea; yet it seems to diminish pathological hyperæsthesia. Strong solutions (50 per cent.) cause a severe continuous pain, probably by destruction of the epithelium and irritation of the nerve-ends.

The remedy may also be used in ointments (5 to 100 per cent.); but Dr. W. does not praise this mode of employment, and patients do not seem to like it. In cases of trachoma, he has used the remedy as a powder mixed with sugar or boracic acid, but found it wanting.

How can we explain the favorable action of the remedy when locally applied? First, it removes the cause of the disease by killing certain microbes; second, by contracting the blood-vessels, it reduces the hyperæmia and gives the tissues their natural elasticity; third, by the intense burning sensation, the instillation causes a sudden reflex spasm of the lids, which gradually disappears, and thus acts beneficially upon the condition of the conjunctiva, subconjunctival tissue, and cornea, in the way of massage; fourth, it reduces the increased sensibility, and somewhat alleviates pain.

From the foregoing, antipyrine is a valuable remedy in the treatment of eye diseases.

It is not probable that it will cause toxic symptoms when used externally in the form of instillations, ointment, or powder; whether it may not, under certain conditions, cause continued local irritation, or have even a deleterious local effect, his experience does not warrant him in saying.

Like other remedies, antipyrine may, in two seemingly parallel cases, act beneficially in one, and disastrously in the other.

Experimental Treatment of Gouty Concretions by Electrical Endosmosis.

During the Tenth International Medical Congress in Berlin in 1890, Dr. George Bayles, of Orange, N. J., presented a paper on this subject in the section on Dermatology and Syphilidography, which is just now in print for the *Transactions*. Having ascertained that gouty concretions are often treated with lithium salts taken internally, with the object of causing urate of lithium to be formed, dissolved, and excreted from the body; and that the difficulty in the treatment was in ensuring that the salts so administered should be absorbed, it occurred to him that perhaps more rapid success might be obtained if the application were made externally, employing the well-known principle of electrical endosmose to carry the lithium into the tissues. This method appeared to offer considerable hope of success, because the lithium would be brought directly into the neighborhood of the concretions and thus be more likely to act promptly and effectively.

Electrical endosmose is that property of an electrical current passing through a porous diaphragm between two solutions, in virtue of which one solution is mechanically transferred across the barrier. The current seems in fact to accelerate the diffusion which always takes place between solutions separated by a porous diaphragm, and at the same time acts in one direction, the solution being carried from the positive to the negative pole, from the anode to the cathode.

To test the possibility of causing lithium salts to pass in this way through an animal membrane, we made the following experiment: A glass funnel of 7.5 cm diameter at aperture was closed by a piece of sheep bladder 0.012 cm thick—thus providing a porous diaphragm of 44 sq. cm area. This funnel was inverted and filled with slightly acidulated water, and a platinum wire passing down the tube formed the negative electrode. The whole was then immersed about 1 cm. below the surface of a 2½% solution of LiO_2 contained in an evaporating dish above the bottom of which it was supported about 1.25 cm. Immediately after the immersion, a second platinum wire forming the positive electrode was dipped in the dish, and a current of 150 milliampères sustained steadily through the apparatus for 75 minutes. The funnel was then removed and emptied. Its contents were mixed with a solution of NaPO_3 , and the mixture evaporated to dryness. The residue was then treated with water

to dissolve the sodium salt and then left for 12 hours. The final precipitate was found to contain 0.5 gramme of LiPO_3 .

The experiment was repeated under precisely similar conditions, except that no current was passed through the apparatus and diffusion only could be active in transferring the salt. The analysis in this case showed that 0.3 gramme of lithium phosphate was present, from which it was presumed that in the previous instance the current had increased the diffusion transfer to the extent of 67%.

Finding the experiment succeed with a membrane, he next tried whether a healthy man after being subjected to such a course of treatment as a patient suffering from concretions might be expected to undergo, would not give indications of the absorption of lithium in his excretions. In October, 1889, J. D., an active healthy laborer, aged 20, weight 140 pounds, was operated upon in his laboratory. He sat in a chair and kept his hands immersed to the wrists in glass jars, one containing a solution of $2\frac{9}{10}$ lithium chloride with a platinum electrode, and the other containing a solution of common salt with the negative electrode. The current passed through him was 4 milliampères, as much as he could conveniently stand. This treatment was continued for about two hours daily during one week, the total time of application amounting to eleven hours. His urine was collected during that week, and tests were applied.

A solution containing $\frac{1}{10000}$ part by weight of LiCl in water was just detectable by a faint red band in the spectrum. No such band could be discerned from the urine itself, but a condensation of all the week's urine reduced to the form of chloride gave a distinct band. An evaporation of $\frac{2}{5}$ of the total quantity of this liquid yielded on analysis 0.22 gramme of lithium chloride; hence the whole amount of salt excreted was 0.55 gramme, corresponding to 0.09 gramme of metallic lithium, or equivalent to the removal of 2.43 grammes of uric acid.

He next applied the method to a patient suffering from an acute and typical form of the malady, in December, 1889. Age 73 years; had lived an active healthy life until ten years previously, at which time he contracted the disease through sleeping in damp sheets. Concretions commencing, continued to increase slowly, until they assumed large proportions. All the joints except the knees were much enlarged by gouty concretions. A certain degree of venous congestion was visible in his face, and incessant pain had supervened in various parts of the body during the last

few months, apparently from the pressure of the calculi upon the nerves. The joints of the fingers were almost obliterated by concretions.

The girth of the little finger of the left hand measured 8.6 cm; that of the corresponding finger on the left hand even greater. There was great weakness and difficulty in walking, but the mind was clear.

Treatment was commenced in the manner above described. The current generated from his laboratory 120 volt dynamo, passed through about 5000 ohms resistance, and entered a jar containing an aqueous solution of lithium chloride, density 1.08, in which the patient immersed his left hand up to the wrist. His right hand was similarly immersed in a solution of common salt. The current after passing through his body left the latter jar by a negative electrode. It was found that he could stand 20 milliampères without inconvenience, and this strength of current was steadily applied for six days during four hours daily. At the end of that time the girth of the left hand little finger was distinctly reduced to 8.2 cm.; the patient also experienced freedom from pain after the first day's treatment. He continued the treatment for two days more during the week following, and then the journeys to and from the laboratory exhausted his strength. The finger girth, after fourteen days from the date of commencing treatment, was 8.0 cms., a total reduction of 0.6 cm. This was estimated to represent a reduction of about 3 cm. of concretion on this particular finger, whose form facilitated accurate measurement. His general condition, beyond the weakness resulting from unaccustomed journeying, was temporarily ameliorated.

From these experiments, it is fair to conclude that satisfactory use can be made of the principle of electrical endosmose in such cases.

Lithia was first tried in the bath solution, and given up on account of its caustic effects. Even an aqueous solution of 1% of lithia was found to blister the hands after some continued immersion. It would therefore have been necessary to employ a very weak solution, had its use been retained, with a correspondingly lengthened course of treatment that time did not allow of. The chloride was used in the expectation that it would be decomposed within the cuticle during the act of endosmose by electrolytic action; or that, failing in this, it would enter into direct combination with the uric acid.

Death Following Supra-Pubic Aspiration of the Bladder.

Dr. Frank Dyer Sanger, of Baltimore, read the report of a case before the Clinical Society of Maryland, April 1st, 1892, as follows:

The patient was 75 years of age, white, large, rather fleshy, full habit. Had had trouble in passing his urine for some time, but never retention. For three days he had suffered much pain in the region of the bladder, and could only pass a small quantity of urine at a time. Examination showed the bladder to be moderately distended, its summit about two inches below the umbilicus. A hot bath gave no relief. A number of strictures were found in the urethra, nevertheless, a long curved catheter was passed as far as the prostatic urethra; nothing could be passed further. Seven hours after the patient was first seen, aspiration was determined upon, as I felt sure the bladder would suffer if not soon relieved. A double inguinal hernia, and a rather thick accumulation of fat over the pubes decided me to insert the needle well up. Having used thorough antiseptic precautions, I felt that I could pass the needle through the peritoneum with safety. About one quart of urine was removed from the bladder. A drop of blood followed the removal of the needle; the point of puncture was covered with a strip of adhesive plaster, and the patient went to sleep.

Next day his bowels moved freely, and he passed considerable urine, a part of which escaped into the bed, and could not be measured. The morning of the second day after the operation he complained of pain in the lower part of the abdomen and tenderness. Bladder could not be felt; pulse somewhat accelerated; temperature normal. Toward evening, abdomen became tympanitic, pulse more rapid, temperature 98°, expression anxious, urine passed in small quantities. Bladder could not be made out. Opium was given to relieve pain, and heat applied to abdomen. Patient died next morning sixty-two hours after the aspiration.

Post-mortem. Needle had entered the abdominal wall two inches above the upper border of the symphysis pubis. A line of light extravasation marked the track of the needle through the wall and parietal peritoneum fold; further than this its track could not be positively determined, as the pelvic cavity was filled with blood. Dense adhesions bound the bladder in all directions, which required considerable force to be broken up. There was considerable red-

ness of the parietal and visceral peritoneum in the vicinity of the bladder. No pus or urine apparently. In freeing the adhesions about the bladder, that organ was ruptured, and about one-half pint of turbid urine escaped. I removed the bladder and urethra *en masse*, but was prevented from further examination by friends who came to claim the body. I regret that I did not at least secure one of the kidneys.

There have been a number of deaths reported from supra-pubic puncture for the relief of a distended bladder. Deneffe and Van Wetter in 1877 collected 152 cases of supra-pubic puncture with six deaths; 87 cases of rectal puncture with eleven deaths. I have not been able to find another case of accident from aspiration in the literature, though my search has not been by any means exhaustive. Deneffe and Van Wetter report 57 cases of aspiration with no accident, showing the improvement upon puncture. The case here reported proves at least that aspiration is not free from danger, and suggests greater circumspectness in its practice.

Dr. W. P. Chunn. In these cases of distended bladder, by sticking close to the symphysis, you can get into the bladder without striking the peritoneum at all, and this is what most operators attempt to do. In this case under consideration, some urine probably trickled out of the bladder and gave rise to peritonitis.

Dr. J. W. Chambers. I begin to look upon every case of greatly distended bladder in old men with enlarged prostate, with a certain amount of apprehension. The condition is a dangerous one. The case in point is interesting from the amount of hæmorrhage that followed a simple aspiration. The condition of the veins over the front of the bladder can be very aptly compared to the condition of the veins in front of the trachea, where we frequently meet irregular veins which give rise to considerable trouble in operations. In the present case, with an enlarged prostate interfering with the circulation, the veins on the anterior surface of the bladder were doubtless distended, and probably one of these varicose veins was punctured, giving rise to the hæmorrhage. The peritoneum was probably infected by the needle which became infected in the bladder. Ordinarily a puncture two inches above the symphysis, when the bladder is distended, would not strike the peritoneum, as there is then usually two and one-half to three inches space between the symphysis and the peritoneal reflection.

Sugar of Milk for Suppression of Urine.

During the session of the Rhode Island Medical Society, December 10th, 1891, Dr Henry Ecroyd, of Newport, reported on his use of sugar of milk in cases of suppression of urine. In several cases of urinary suppression following etherization this remedy had been most satisfactory. It was given in $\bar{5}j$ doses every two hours. It had also been effectual in cases of suppressed or scanty urine from other causes than ether:

Dr. Pike, of Bristol, said he had obtained excellent results from sugar of milk, given, however, in smaller doses; gr. xv, every two hours.

Dr. Collins, of Providence, asked Dr. Ecroyd if he had used the remedy before surgical operations as a prophylactic against suppression from etherization? Answer in the negative.

Dr. White, of Providence, said he had tested sugar of milk in two cases of general dropsy and dyspnœa, with scanty urine, at the Rhode Island Hospital. The results were pronounced and favorable. The dosage was $\bar{5}j$ in water Oij. in twelve hours.

Dr. G. F. Keene, of Howard, reported his very successful use of the same remedy in three cases of general dropsy and dyspnœa.

Dr. J. R. Bronson asked for an explanation of the therapeutic action of a substance he had regarded as a mere placebo.

Dr. Keene replied that probably the presence of the sugar in the kidneys called for water to effect its solution.

Fracture of the Ischium During Labor.

Dr. T. A. Davis, of San Diego, during the recent session (April, 1892,) of the Medical Society of the State of California, reported a case of this unusual accident. It was so rare that he had, in the literature at his command, been able to find only three cases. The present one occurred in a small boned, slender anemic woman, 31 years of age. On the ninth day after delivery the patient, who was suffering from a lacerated perineum, with incipient crural phlebitis, complained of pain in the laceration, as well as immediately above and behind the pubes. She felt as if something moved or slipped when changing her position in bed. Not wishing to disturb the union, a careful examination was not made until between the second and third week, when, on passing the finger along the pubic ramus, an ir-

regularity was discovered at the junction of ischium and pubis on the right side. Back of this there was a fracture through the body of the ischium at the lesser ischiatic notch, and, with the finger within and slight pressure on the tuberosity, motion was plainly obtained at both points. The fracture was simple and uncomplicated; patient was placed on her back, a stout canvas hip and thigh bandage applied, with the right hip resting over a rubber ring, and was kept in bed nine weeks after confinement. There was a history of "milk leg" in a former confinement, and the speaker questioned whether this had not been an undiscovered fracture.—*Occident. Med. Times, May, 1892.*

Cure of Persistent Hiccough.

According to *Mercredi Medical*, Feb. 19, 1892, Leloir, for hiccough every half minute in a child twelve years old, which had resisted all previously tried treatments, forcibly and uninterruptedly compressed for full three minutes, by means of his finger, the phrenic nerve between the two sterno-clavicular attachments of the sterno-cleido mastoid muscle. The pressure was maintained in spite of the painful nature of the proceedings; but the hiccough ceased; never to return. He has since tried this method many times with equally favorable results.

Reed & Carnrick's New Advertisement

Claims that Lacto-Preparata, an all-Milk Food, for young infants, and Carnrick's Food, composed of half Lacto-Preparata and half dextrinized wheat, for use after six months of age, have now practically reached perfection in keeping qualities, and that they are the only Infant Foods in the market that will alone thoroughly nourish a child during the nursing period. Their Lacto-Preparata almost perfectly resembles human milk in character, composition and taste.

Antikamnia for Chordee.

An *Exchange* reports a case in which five grains of Antikamnia, taken at bedtime, aborted the usual chordee. On a subsequent night, it returned slightly, but upon the patient's taking another five-grain powder, it promptly left him.

Book Notices.

Diseases of the Urinary Apparatus. Phlegmasic Affections.

By JOHN W. S. GOULEY, M. D., Surgeon to Bellevue Hospital. New York: D. Appleton & Co. 1892. Demi 8vo. Pp. 342. Cloth. Price, \$1.50. (For sale by West, Johnson & Co., Richmond.)

This is an intensely interesting work, full of useful historic record and suggestive facts, graphic in description and impressive in its assertions or discussions. But when the practitioner has laid the book aside, he cannot well refer his student to it for the details he should know. For instance, cystotomy is talked about, and aspiration of the distended bladder are discussed in a most entertaining way; but the details as to how to proceed to do the operations are not given. In other words, the work seems to presuppose knowledge of operative surgery. But in matters of diagnosis, prognosis, suggestive therapeutics, etc., very valuable information is given.

International Medical Annual and Practitioner's Index for 1892.

Edited by P. W. WILLIAMS, M. D., Secretary of Staff. Assisted by a Corps of Thirty two Collaborators—European and American—Specialists in their Several Departments. 644 octavo pages. Illustrated. \$2.75. E. B. Treat, Publisher, 5 Cooper Union, New York.

The tenth yearly issue of this valuable one-volume reference work richly deserves and perpetuates the enviable reputation of its predecessors for selection of material, accuracy of statement and great usefulness. The corps of department editors is representative in every respect. Numerous illustrations—many of which are in colors—make the "Annual" more than ever welcome to the Profession, as providing, at a reasonable outlay, the handiest and best résumé of Medical Progress yet offered. *Part I.* comprises the New Remedies, together with an extended Review of the Therapeutic Progress of the Year. *Part II.*, comprising the major portion of the book, is given to the consideration of New Treatment; and is a retrospect of the year's work, with numerous original articles by eminent authorities. *The third*—and last part—is made up of miscellaneous articles, such as Recent Advances in Bacteriology; Medical Photography; Sanitary Science; Use of Suppositories in the Treatment of Disease; Improvements in Pharmacy; New Inventions in Instruments and Appliances; Books of

the Year, etc. The arrangement of the work is alphabetical, and with its complete Index, makes it a reference book of rare worth. In short, the "Annual" is what it claims to be—a recapitulation of the year's progress in medicine, serving to keep the practitioner abreast of the times with reference to the medical literature of the world.

Text-Book of Nursing, for the Use of Training Schools, Families and Private Students. Compiled by CLARA S. WEEKS-SHAW. *Second Edition. Revised and Enlarged, with Illustrations.* New York: D. Appleton & Co. 1892. Cloth. 12mo. Pp. 391. \$1.75. (For sale by West, Johnson & Co., Richmond.)

If we could only induce doctors to read this book, and through them, persuade all who are to come in relation with sick or wounded, as nurses, to carefully study it, then we would accomplish an important good. For no one can attentively read the book without learning something of practical value, or else have his memory refreshed as to essential facts to the advantage of the patient, and to the help of the intelligent physician. This "Second Edition" is such an improvement on anything yet issued, that we very earnestly recommend it as most nearly filling the need of a text-book for nurses and training schools. It tells what the intelligent nurse is expected to know and to do at the bedside, and how to attend to such things as passing the catheter, bandaging, etc.

Outlines of Zoology. By J. ARTHUR THOMPSON, M. A., F. R. S. E., Lecturer on Zoology in School of Medicine, Edinburgh, etc. With 32 full-page Illustrations. New York: D. Appleton & Co. 1892. Cloth. 12mo. Pp. 641. \$3.00. (For sale by West, Johnston & Co., Richmond.)

The study of biology is too much neglected by medical students of the present day. The essential principles are best studied by learning the elements of zoology. Such outlines are well presented in the book under notice. In fact, these "Outlines," beginning with the recognition of the "doctrine of descent," carries one far into many details which make the attentive reader a proficient in the subject of zoology; and proficiency in zoology is quite a help in the understanding of human physiology—the special study of the physician. This work is most valuable for any of our readers who may be aroused to the recognition of the importance of the subject of zoology.

Treatise on Gynæcology—Medical and Surgical. By S. POZZI, M. D., Professor Agregé a la Faculté de Médecine, etc. *Transluted from the French Edition under the Supervision of, and with Additions by,* BROOKS H. WELLS, M. D., Lecturer on Gynecology at New York Polyclinic. VOL. II. With 174 Wood Engravings and 9 Full-page Plates in Colors. New York: William Wood & Co. 1892. Large 8vo. Pp. 583. (From Publishers.)

About 75 pages of this volume (which concludes the *Treatise*) are taken up with bibliographic notes. The text descriptions are mostly aided by wood engravings and plates in colors. The general character of the work as a whole is surgical, so far as the modes of treatment recommended are concerned. The subjects treated of in detail in this Vol. II relate to the inflammation of the uterine adnexa; neoplasms of the uterine adnexa and ligaments, genital tuberculosis, intra- and extra peritoneal pelvic hæmatocele, extra-uterine pregnancy, diseases of the vagina, of the vulva; malformations of the genital organs; and diseases of the urinary tract, rectum and pelvis. Our opinion of this work, as expressed in noticing Vol. I in the February number, 1892, of this journal, has been fully sustained by examination of this Vol. II. We "recommend this *Treatise* to practitioners as a most excellent one—rich enough in descriptive details and illustrations to be a perfect guide in operations, etc., and complete enough in the scope of subjects considered to take the place of any existing standard work on gynæcology."

Diseases of the Nervous System. By J. A. ORMEROD, M. D., Oxon, F. R. C. P., Lond., Physician to National Hospital for the Paralyzed and Epileptic, etc., London. *With Numerous Illustrations.* Philadelphia: P. Blakiston, Son & Co. 1892. Demi 8vo. Pp. 343. (For sale by Publishers.)

The excellence of this work is the interest it gives to the student in pursuing the subject of neurology. It is not intended as a substitute for any of the more pretentious works on nervous diseases, but as a supplement, or rather as an analysis of the principal facts so grouped together as to be easily studied and understood. Maps, diagrams and illustrations are freely used. The anatomy and functions of the nervous system are graphically stated according to the latest proofs. It is thoroughly up with the times, and the book is valuable to either the practitioner, specialist or student.

Diseases of the Eye—A Hand-Book of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, M. D., Professor of Diseases of the Eye in Philadelphia Polyclinic, etc. *With 216 Illustrations and 2 Chromo-Lithographic Plates.* Philadelphia: W. B. Saunders. 1892. 8vo. Pp. 640. Cloth, \$4 net; Sheep, \$5 net. (From Publisher.)

The recommendation of this as a text-book for students and practitioners alike consists in its practical advice and accuracy of description. All that relates to the ophthalmoscope and its uses should be thoroughly mastered. The tables for differential diagnoses are very serviceable, as well as the symptom-grouping which, with each important general disease, precedes the special symptoms of the various types. The indications and detailed methods of treatment are well given. Nearly one-third of the illustrations are new and useful. Dr. James Wallace, Chief of the Eye Dispensary of the University Hospital, and Dr. Edward Jackson, Professor of Ophthalmology in the Philadelphia Polyclinic, have added to the value of the work by contributions of special chapters. In a word, this is a most valuable scientific work on diseases of the eye, written from the standpoint of thoroughly competent practitioners and teachers.

Editorial.

Medical Society of Virginia—Change of Place of Meeting to Alleghany Springs, Montgomery County, Va., September 13th, 1892.

Owing to the burning down of Luray Inn some months ago, the invitation for the Medical Society of Virginia to meet at Luray this year had to be recalled. The Executive Committee of the Society received a most cordial invitation from Capt. C. A. Colhoun, Proprietor of Alleghany Springs, Montgomery Co., Va., to meet at this renowned Health Resort, during the week beginning Tuesday, September 13th, 1892, which invitation has been accepted. Rate, \$1.50 per day, with no charge for carriage from the depot (Shawsville) on the Norfolk and Western Railroad. Full details will be published in the July number of this journal. In the meantime, let each doctor make a note of this change of place, and tell his neighbors about it, so as to secure a large attendance and a profitable meeting. It will be remem-

bered that the former Session held at Alleghany Springs was one of the most successful in its results to the Society ever held; and we have the assurance that the approaching Session will be altogether as successful and profitable.

Artificial Urethra in Prostatic Obstruction.

The following editorial note is taken from the *Medical Press and Circular* (London and Dublin), May 11th, 1892. It will gratify the numerous friends of Dr. Hunter McGuire to see this latest evidence of his appreciation abroad, and it also shows the wonderful fairness and justice of our English speaking cousins:

"The possessor of an enlarged prostate that obstructs the free passage of urine leads a miserable life. To be necessitated to keep long catheters and to live in dread of rectal or supra-pubic puncture is not conducive to happiness. Latterly numerous suggestions have been made to get rid of the annoyance and risk to life of cases of prostatic obstruction, and a recent number of *L'Union Médicale* contains a paper which makes the valuable suggestion of an anterior supra-pubic artificial urethra, which is described as the operation of M. le Professeur Poncet, who has performed the operation thirty-five times, and the writer concludes that the 'operation will be of great service in chronic prostatic disease.' With everything written in praise of the operation we agree. But why call the operation Poncet's? A reference to the *Medical Press* of July 24th, 1899, page 80, will show, under the heading of 'The Treatment of Chronic Cystitis,' an article by Mr. Foy, that Dr. F. Verchère performed three years ago a similar operation to 'Poncet's.' Mr. Foy also shows that Verchère was anticipated both in the idea and in the performance by the operation of Dr. Hunter McGuire, of Richmond, Va., whose paper was published in the *Virginia Medical Monthly*, Vol. XV, No. 7, and in the 'Transactions of the American Surgical Association,' Vol. VI, being the volume for the year 1888. Dr. McGuire's paper was read at Washington, and bears the title 'The Formation of an Artificial Urethra in Prostatic Obstruction.' Under the heading 'A Report of Twenty-one cases of Supra-pubic Cystotomy, with Remarks,' he made a further contribution on the subject, which was published in the 'Transactions of the American Surgical Association,' Vol. VIII (1890). We notice the matter because we think it very desirable that the praise and credit of devising and successfully completing a new and much required operation should be justly

awarded; and we feel certain that our contemporary *L'Union Médicale* and our professional brethren in France would not wittingly deprive one of the most distinguished surgeons of the English speaking peoples, Dr. Hunter McGuire, of his well-won honor."

That the same idea had suggested itself to such men as Dr. F. Verchère and Prof. Poncet, proves the great value of the operation of supra-pubic cystotomy, which Dr. McGuire performed and published some years before either of the distinguished gentlemen alluded to had attempted it. Dr. McGuire's first operation for the formation of an artificial urethra, was done in November, 1887. He has now performed the operation forty-six times, with only two deaths. Can any of the other operations or methods of treatment devised for the cure of the conditions calling for such an operation as supra-pubic cystotomy show anything like such a record? We think not.

In the most recent of valuable works on *Diseases of the Urinary Apparatus*, which is noticed in this issue, the author, Dr. J. W. Gouley, of New York, says, with reference to supra-pubic cystotomy, that the fistulous tract has been kept open in some instances for years "without curing the cystitis or the contracture." And he absolutely omits any allusion whatever to the treatment of complete obstruction of urinary flow through the urethra by permanent drainage through the supra-pubic fistula or "artificial urethra." This is an unaccountable blunder for an author so eminent in his special practice as Dr. Gouley to make in a work published in 1892; for he can scarcely be ignorant of the positive benefits of supra-pubic cystotomy as now frequently practiced by Dr. McGuire and others in the very class of cases in which the recommendations contained in Dr. Gouley's book are not of avail. It is misleading for a book which will be looked to as a guide in practice in the treatment of so-called incurable cystitis to dismiss the question as to the propriety of supra-pubic cystotomy with the simple remark that the operation does not cure—without even a statement of developed facts as to beneficial results. Dr. McGuire showed us a case a few days ago, operated upon in July, 1888, for cystitis due to prostatic obstruction, in which the cystitis is practically cured, while the artificial supra-pubic urethra has been, and is now easily kept patent by wearing an aluminium plug; and he has, he says, many similar cases. The man we saw often retains his urine, without inconvenience, six or eight hours at night while laying down;

but is compelled to empty the bladder about every two hours during the day, when on removal of the aluminium plug, he sends the stream, without strain, two or three feet from his body, the last quantities of urine coming in jets as through the natural channel. This man, with his artificial supra-pubic urethra, is practically *cured* of what would no doubt have been an incurable cystitis.

Prize of \$100 for Popular Essay on the Pretensions of Homœopathy, etc.

Dr. George M. Gould, of Philadelphia, Pa., in an Address before the Graduating Class of Buffalo University, May, 1892, offers a Prize of One Hundred Dollars for the best Essay that, historically and actually, "will show up the Ridiculous Pretensions of Modern Homœopathic Practice." The offer is open to any one of the regular profession of the United States. It is believed that such a monograph, supplied as a missionary tract for gratuitous distribution by physicians, "would set thousands of people straight, and would soon stop the legislative and financial governmental support of this trumpery." The Competing Essays for this Prize of One Hundred Dollars "should not contain over 15,000 words; and, in simplicity and directness, should be adapted to the commonest lay understanding." These Essays should be sent to Dr. George M. Gould, of Philadelphia, Pa., on or before January 1st, 1893, *typewritten, without the name of the author attached*, but with a motto signature, accompanied by a sealed letter, giving the name of the author, corresponding with motto or *nom de plume*. The several essays will be given to a Competent Committee, and, when their decision is reached, the sealed letters of the authors will be opened, and the Prize sent the Winner. The Essay will then be cheaply but well printed in large quantities, and supplied physicians anywhere, at the cost of printing, for distribution to the laity of their respective communities.

Who of the subscribers to this journal will win this Prize?

Lithograph of Cerebral Localizations.

The Dios Chemical Company, of St. Louis, have issued a very valuable lithographic map of "*Cerebral Localizations*," according to the drawings of Horsley, Beever, and Schafer. The Dios Company will mail a copy of this map to physicians, free of all charge, on application. It is well worth having in the doctor's office as an aid to study and as a help to memory.

The American Medical Association Session in Detroit, Mich.,

June 7-10, 1892, promises to be a great success. Except the railroads of the Central Traffic Association, which have granted one full fare for round trip, all other railroads of the country have agreed to charge one full fare going to Detroit and return for one-third full fare. This arrangement is good for each lady, etc., accompanying the doctor on the trip. But every doctor proposing to attend the Session is cautioned to require the ticket agent, at the point at which he buys his through ticket to Detroit, to give him a certificate stating that he paid full fare going—for himself and each of his party. When he gets to Detroit, get the signature of the Secretary of the American Medical Association on each of the certificates, and when he starts to return, the railroad ticket agent in Detroit will sell return home tickets for one-third the full fare. Dr. Wm. B. Atkinson, of Philadelphia, is Secretary, and will be in Detroit early and long. The Chesapeake and Ohio Railroad is practically the quickest and cheapest route for Virginians and North Carolinians—the through ticket from Richmond via Cincinnati being \$17.05; and on the train leaving at 2 P. M., the time is only twenty-eight hours and twenty minutes.

Millboro Springs, Bath Co., Va.

Reference to the advertisement of this well-known, summer mountain springs resort, will show that it will be conducted this season under the personal supervision of Dr. G. M. Nickell, in connection with his Sanitarium at Millboro Depot—just two miles away. As an earnest member of the Medical Society of Virginia, as a practitioner of excellent wide reputation, and as a gentleman of experience—established by his success in the management of the popular Sanitarium at Millboro Depot—Dr. Nickell is well and favorably known, and we take great pleasure in commending his new enterprises to the patronage of the profession and people.

Rawley Springs Hotel

Offers this season larger and more excellent accommodations than this noted Springs has offered since the burning down in 1886. Many who have visited the Springs the last few seasons under the proprietorship of Mr. Watkins Lee, speak in the highest terms of the table and service and the home comforts, the refined and cultivated society, and the attention of Mr. Lee and all the employees.

American Academy of Medicine.

The following topics are promised for discussion at the Seventeenth Annual Meeting of the Academy at the Cadillac Hotel, Detroit, Mich., on Saturday, June 4, and Monday, June 6, 1892.

"Essentials and Non-essentials in Medical Education," the Address of the Retiring President, Dr. P. S. Conner, of Cincinnati.

"The Value of the General Preparatory Training Afforded by the College as Compared with the Special Preparatory Work suggested by the Medical School in the Preliminary Education of the Physician"—Dr. T. F. Moses, of Urbana, O.

"Does a Classical Course enable a Student to Shorten the Period of Professional Study?"—Dr. V. C. Vaughan, of Ann Arbor, Mich.

"The Value of a Collegiate Degree as an Evidence of Fitness for the Study of Medicine"—Dr. L. H. Meister, of Chicago.

"The Value of Academical Training Preparatory to the Study of Medicine," by Drs. H. B. Allyn, of Philadelphia; W. D. Bidwell, of Washington, and Elbert Wing, of Chicago.

"The Newer Medical Education in the United States," by Drs. W. J. Herdman, of Ann Arbor; Charles Jewett, of Brooklyn, and Elbert Wing, of Chicago.

"Some Phase of the State Supervision of the Practice of Medicine," by Dr. Perry H. Millard, of St. Paul.

Members of the profession are cordially invited to be present at the sessions of the Academy.

Messrs. Parke, Davis & Co.,

Have new advertisements in this issue of preparations of every-day value to practitioners. Their complete arrangements to supply the profession with everything newly-discovered in medicine, and the reliability of their own productions and preparations, make it a pleasure to anticipate seeing their extensive works, etc., during the visit to the American Medical Association at Detroit, June 5-10.

The Louisiana State Medical Society

Held its Thirteenth Annual Meeting April 26th and 27th. The attendance, with one exception, was the largest ever had. Dr. J. B. Elliott, of New Orleans, was re-elected President. A bill to regulate the practice of medicine in Louisiana, by establishing a State Medical Examining Board, was urged, and it is hoped will be enacted by the sitting Legislature of Louisiana.

Summer Resort for Consumptives Amid The Pines.

Southern Pines, N. C., the new health resort for consumptives, is so located as to be one of, if not *the* best known spot during the summer months for throat and pulmonary patients, for hay fever and like complaints. The place is entirely free from malaria, and during warm weather patients experience a greater benefit than any other season of the year. This is due to the fact that the warmth of summer causes the atmosphere to be loaded with the balsamic qualities of the pines. Dr. G. H. Saddleson says: "During my stay at Southern Pines, N. C., for more than ten years on account of lung trouble, I have found that my grerest benefit is received during the summer months. In a more Southern section where malaria exists, of course the patient cannot stay during hot weather. But here, where no form of malaria exists, one can pass the whole summer to the greatest advantage. The thermometer rarely goes above 90° in the shade."

The South Carolina State Medical Association

Held a most excellent session in Georgetown, S. C., during April. Dr. Joseph Price, of Philadelphia, who was in attendance by invitation, writes us that the meeting was largely attended, and the discussions full and instructive. The doors of the whole ancient town were thrown open to the visitors. "The generous hospitality of the Society and of the Georgetown people was most delightful." * * * "It was strictly a scientific meeting, and one that made a better showing than some of the Eastern Societies"—so writes Dr. Price.

International Congress of Gynæcology and Obstetrics.

First Session—Brussels, Belgium, Sept. 14 to 19, 1892. The following distinguished gentlemen have been delegated to represent the British Gynæcological Society at the International Congress next September:—Robert Barnes, Granville Bantock, A. S. Simpson, Lawson Tait. Great preparations are being made to entertain visiting physicians. His Majesty, King Leopold, will assist at the opening of the Congress. There will be a grand reception by the Belgian Gynæcological Society; also a banquet by the Society; gala performance at the Grand Opera; garden party in the gardens of the Royal family, etc. For information relating to the Congress, address Dr. F. Henrotin, American Secretary, 353 La Salle Ave., Chicago, Ill.

Mr. George Foy, F. R. C. S., of Dublin,

We learn with great pleasure, expects to visit America in September, and while here will attend the session of the Medical Society of Virginia at Alleghany Springs, September 13th. As Surgeon to Whitworth Hospital, Author of "Anæsthetics, Ancient and Modern," and a contributor of many valuable articles to medical journalism—including this journal—Mr. Foy has gained a most enviable reputation abroad as well as at home, and we will have a cordial welcome for him.

The Association of Railway Surgeons of the United States

Held a most pleasant and profitable session at Old Point Comfort, Va., May 25th and 26th. We regret that we have to go to press before it is possible to get a report of the proceedings. Some 800 or more Railway Surgeons, from all parts of the United States, were in attendance. Dr. C. W. P. Brock, of Richmond, Va., was Chairman of the Committee of Arrangements, and it is needless to add that his part was well done.

Gower's Diseases of the Nervous System.

According to a note from Messrs. P. Blakiston, Son & Co., a German edition of the second revision of this book has been published by Cohen, of Bonn; and we understand that an Italian translation is nearly ready.

Messrs. Battle & Co. Win their Suit.

In the trial of Finlay & Brunswick, in the U. S. Circuit Court for the Eastern District of Louisiana, judgment was given against them for using the name of "Bromidia" on some of their preparations, and caused them to pay to Battle & Co. all profits received from sale by them of the spurious articles, as a punishment for imposing on the trade their preparation under the trade-mark of "Bromidia," which belongs alone to Battle & Co., of St. Louis.

Mississippi State Medical Society.

During the Twenty-fifth Annual Session, held in Natchez, April 20-22, the following officers were elected for the ensuing year: Dr. W. G. Kiger, of Vicksburg, *President*; Drs. J. D. Smythe, of Greenville, and A. J. Hall, of Natchez, *Vice-Presidents*; Drs. H. H. Haralson, of Forest, and W. R. Harper, of Rolling Fork, *Recording Secretary* and *Assistant Recording Secretary*; Dr. P. A. Rowland, of Coffeetown, *Corresponding Secretary*; Dr. J. F. Hunter, of Jackson, *Treasurer*.

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Original Communications.

ART. I.—Ante-Partum (Accidental) Hæmorrhage.*

By T. GRANGE SIMONS, M. D., of Charleston, S. C.

The following extracts from my obstetrical case-books will serve to introduce the subject—so formidable and so trying to the physician, and often fatal to the mother and child. In a somewhat extended experience in dispensary and hospital, and in twenty-five years of private practice, it was my good fortune to escape any serious form of accidental hæmorrhage until December 9th, 1888:

CASE I.—Mrs. K., age 28, multipara, a petite blonde of delicate but good physique, and with previous good health. Within three weeks of expected full term, she fell down a long flight of stairs. At the time, beyond a few superficial injuries, she was not aware of any serious effects of the fall; but within two hours after, she felt a sudden free hæmorrhage from the vulva and some faintness, but slight pain in uterus. I was with her within twenty minutes. No dilatation or uterine action was apparent. The loss of blood had been profuse, but had almost ceased, and the patient was in good condition. Rest in bed was insisted on, and morphine, gr. $\frac{1}{4}$, was given to ensure quiet. At 2 P. M., some bloody serous fluid was discharged at intervals. This

*Read before the South Carolina State Medical Association, April 26th, 1892.

was supposed to be amniotic, and at intervals it escaped, but never in larger quantities than from a half to one ounce.

Dec. 16th, at 3 P. M., uterine contractions began, and pains occurred with regularity. A large, fresh, soft clot was discharged, followed by some free hæmorrhage. I remained with my patient, but did not interfere. The presentation was L. A. O. The pains never were severe, yet labor advanced, and at 2 A. M. *Dec. 17th*, a small female child was born. Ergot fluid extract, 5j, was given; Créde's expression was used, and in five or six minutes the placenta was delivered. This showed considerable detachment, as large ecchymoses or clots were observed on the surface. The mother and child did well.

CASE II.—Mrs. P., age 41, seventh pregnancy; five at term; two abortions; last one eighteen months ago, and nearly fourteen years since last delivery, which had been attended by profuse hæmorrhage prior to delivery, as I was afterwards informed. The patient was near full term, and was seen December 17th at 1½ A. M. She had been suffering with a severe attack of indigestion, with violent nausea and cramp. Domestic remedies having failed to afford relief, and as she felt some uterine pains, I was sent for, and found her prostrated to a degree. Pulse weak; respiration sighing; skin cool, and with clammy sweat. Restlessness and anxiety marked. She had noticed some slight amount of a glairy "pink discharge," as she expressed it. She complained of the distress from the nausea, and vomiting of acid—undigested food. Spirits ammonia arom. and tinct. ginger were given, which, with sinapisms, seemed to afford relief. Vaginal examination showed but little dilatation of the os uteri, which was thin, and a large laceration healed, the result of previous parturition. The patient was weak, and at times nauseated, but no further vomiting occurred.

About 4 A. M., the patient was quiet and cheerful; engaged in conversation. The nurse, who was seated by the bedside, called my attention to a sudden gush of what she thought was a rupture of the membranes. I found the bed filled with bloody fluid and some small clots. The patient was not aware of the danger, but soon showed great and alarming collapse. The pains had not been at any time severe, but dilatation had advanced—the os then being nearly two inches in diameter. With Sims' speculum I immediately examined, and the flow, that had not continued, seemed to come from the old laceration in the cervix that

had enlarged. I tamponed carefully and firmly. The pains increased, and the tampon was partly dislodged in about thirty minutes. I then removed the tampon, and found that no further bleeding had occurred. I quickly and easily applied forceps, and delivered a large exsanguined female child; the placenta and a mass of black clot was expelled at once. Ergot fluid ext., 5j, had been given at 4:45 A. M. When I removed the tampon, Crêde's pressure was kept up, and firm contraction of the uterus obtained. The mother, who had been stimulated with ammonia and brandy, seemed to react somewhat, and though feeble from the loss of blood, was interested, and expressed great regret at the loss of the child. She was kept quiet, but at 5½ A. M. insisted upon turning over, and before any assistance could be given turned over on her back. Nausea and prostration at once occurred. She became restless, with dim vision, ringing sounds in ears, syncope, collapse. No return of hæmorrhage occurred, and the uterus was firmly contracted. Hot applications with friction to extremities. Ammonia, ether hypodermatically, stimulants, galvanic battery, all failed to arouse her, and she died.

CASE III—Mrs. D., age 26, eighth pregnancy. This patient, a fat, indolent, nervous, self-indulgent woman, who seldom left her house, and who was much addicted to the use of bromides and all sorts of "nervines" for years; rebellious at her condition and despondent, was near her full term, when, on the morning of July 8th, without any premonition, the membranes ruptured at 6 A. M. Slight pains ensued, and when seen by me, about one hour later, but little dilatation of the os was observed. L. A. O. The pelvis was large, and by 9 A. M. the pains became stronger, and a large mass of clot, dark and firm, escaped, followed by a free hæmorrhage. This at once ceased, and did not recur. At 12 M., a large dead male child was delivered; the cord was flaccid and collapsed; placenta, with large old clots adherent, was discharged. Fluid extract ergot administered. Uterus contracted firmly. No appreciable cause could be ascertained for this placental separation that had existed for some time, nor was the patient aware of any pain or discomfort indicative of such condition.

CASE IV.—Mrs. P., primipara, age 22; health good; in eighth month of pregnancy; habit constipated. About 12 M. October 28th, 1891, while straining at stool, felt a sudden gush of blood without any pain. Syncope and collapse at once ensued. Dr. L., who happened to be within reach,

was hastily summoned; he gave stimulants and ergot hypodermatically, and tamponed.

I saw the patient about two hours afterwards, and although anæmic and depressed, with weak pulse and accelerated respiration, she was quiet. Gave hot milk, and insisted upon rest, with head low. At 5 P. M., the tampon showed that some bleeding had occurred. I removed it, and found the os closed or but slightly dilated, no bleeding external. With Sims' speculum, I re-applied a carbolized tampon carefully and firmly within and around the cervix. Hot milk, with tincture opii, gtts xx, was given at 1 A. M.

Oct. 29th, the patient, with whom I had remained on account of her great prostration and alarming condition, was aware of some pains; these increased in frequency and force. Tincture digitalis, gtts x, was given in hot whiskey and water, as the pulse was very feeble and frequent. This was repeated three times at hourly intervals, and with benefit. The labor advanced, and portions of the tampon became expelled. No bleeding of importance was observed, and at 6 A. M. a dead female child was delivered. The placenta, with large masses of black clots, was at once expelled. Uterine contraction was slow; compression and the hot intra-uterine douche used also; hypodermatic injection of fluid ext. ergot, m. xx, was administered. Uterine contraction resulted in about thirty minutes. The placenta showed large dark ecchymoses over the portion where separation had occurred. The patient remained anæmic and extremely prostrate. Pulse frequent and feeble; respiration, thirty-five per minute. Nausea, disturbed vision, dilated pupils, all evinced her danger. Rest, with head low, hot milk, stimulants, and ammonia, all were freely used, and for days the patient was in a most critical condition. Temperature depressed. On the morning of the third day after delivery, temperature rose to 101° F.; patient had passed a restless night. Lochia scant, and with bad odor. The hot douche that had been daily used was now replaced with hydrarg. bichlor. 1 to 3,000, to be used every four hours. *R*—Quinia sulph., grs. x, pulv. digitalis, gr. j, every four hours. The next day temperature still. Examination with speculum showed large sloughy spot on posterior lip of os uteri. Ten per cent. solution peroxide hydrogen was applied freely to the cervix and interior of uterus. Creolin, 3ij, to one pint of hot water, to be used freely; stimulants. *R*—Tinct. ferri chloride, gtts xxv; hydrarg. bichloridi, gr. $\frac{1}{30}$, every three hours.

The patient had a most alarming illness for five weeks, and was left weak and anæmic. Partial stenosis of os uteri has resulted from the extensive sloughing that occurred.

I regard this as resulting from the compression and necrosis of tissue caused by the pressure of the tampon upon the exsanguined cervix, for that portion of the tampon in the posterior vaginal cul-de-sac was not expelled, but remained in position even after the head escaped from the os uteri, and thus kept up a hard pressure that resulted in the slough. This must be considered a grave source of danger in the use of the tampon when firmly applied.

Hæmorrhage before delivery presents to us one of the most formidable conditions to deal with; and the problems as to the several causes and the appropriate treatment so urgently and immediately demanded, for the chances for the life of the child are small. And unless we act with calmness and skill, we may also sacrifice the mother. Yet, even with all conditions as to treatment, with all appliances ready at hand, we may be compelled to see our efforts futile and the mother succumb to the fatal hæmorrhage.

The several conditions causing ante-partum hæmorrhage will be briefly alluded to, nor do we propose to deal with all of these: Placenta prævia, lacerated cervix, malignant disease of the os uteri, varix and rupture of uterus. Placenta prævia would have given some evidence prior to completion of seventh month. We will allude to the several conditions as we proceed, and the means of discerning them.

Accidental hæmorrhage may be due to several causes. Violent straining efforts while vomiting or at stool, coughing, eruptive fevers, nephritis and other diseases may cause it. The contractions of the womb, caused by these several means, produce a partial detachment of the placenta from the uterus, and blood is effused in greater or less quantity. If not excessive, labor may not occur, but if the dissecting up of the placenta from its site is extensive, our patient may, without premonitory pains, have a sudden syncope or collapse, or she may not be able to express her sensation before loss of consciousness. The blood may not appear

from the vulva, but may be poured out within the uterine cavity; so that no apparent evidence warns of danger. This is the concealed or internal hæmorrhage, and presents many dangers to our patient. The pain may be sudden and of a severe tearing or bursting nature. The uterus may present a distended, irregular outline, with doughy softness, obliterating the contour of the fœtus and obscuring its heart sounds, for these are weakened or destroyed by the extent of placental separation and resulting anæmia. The collapse, pallor, clammy, cold skin, sighing, quickened respiration, dyspnœa, with disturbed vision and dilated pupils, all point to the shock and great danger to our patient. The pains are feeble or arrested, if they have been present. Or we may have a sudden gush or flow by the escape of the blood between the placenta and the fœtal membranes and the uterine walls. These conditions usually occur during or prior to the first stage of labor, and before dilatation has begun.

Uterine rupture might simulate this condition, but we would have the uterine mass diminished in size, and the fœtal limbs would be readily felt through the abdominal walls of the mother. The presentation at the os would also recede, and the uterine rent be perceived.

The subjective symptoms in both of these conditions would be alike. The escape of blood will enable us to discern the danger to our patient, and under even the most favorable circumstances we will have to act with deliberation.

Shall we proceed to empty the uterus, or shall we attempt to save mother and child? Responsibility must be assumed in either case. In the several cases I report, in two I determined to try and save the child with the mother, and was rewarded in Case I by so doing. The problem presented is a severe test, and will demand critical judgment. Can we delay and allow the case to proceed to full time of gestation, or is the placental separation so great as to destroy the fœtus, and by waiting will we not assume the risk of loss of the mother also? Each case presents essen-

tial features that will compel us to assume responsibility, nor should we seek to evade it.

If the condition of the mother is such that no great prostration is apparent, and if the foetal heart and movements are assured, we should wait, yet not leave our patient, but carefully and anxiously guard her from exertion of mind or body. Rest in the recumbent posture, with head low; avoidance of all sudden movements in bed; opiates and sedatives, if needed, and restoratives may be required. But, if no medicines are indicated, do not tax the stomach. Light, easily digested food, and great caution in defecation or urination; use the catheter if needed. These cases will demand our constant attention, and we must ever be alert for premonitions of danger. The next grave problem that we must meet is that presented when the patient's strength is impaired and we deem it best to empty the womb.

Shall we puncture the membrane and evacuate the amniotic fluid, or shall we dilate with Barnes' bags or by digital force, or must we use the tampon? The evacuation of the fluid may be a source of danger, for with the membranes intact, the escape of blood into the uterine cavity cannot be so great as when the outlet is open and the blood can freely pour out. The amniotic fluid itself exercises pressure, so as to arrest the bleeding, and the irregular foetal surfaces will aid in clot formation, and I am disposed to delay rupturing the membranes until we can extract the foetus by forceps or version.

Shall we use Barnes' dilators on the tampon, or effect digital dilatation? If collapse is great, we must act promptly. Grasp the fundus, keep up firm compression, and forced digital dilatation can be made. The Barnes' bags will act as a tampon, and also advance labor by dilating the os until we can extract the foetus, and is attended with less shock and pain than with digital dilatation. We must avoid the use of chloroform in such cases, as the enfeebled heart's action and shock will render its use fraught with danger.

If the amniotic fluid has escaped and the hæmorrhage

free, the use of the bags will aid in restraining the bleeding; but we must be anxiously vigilant that we do not convert the open hæmorrhage into a concealed one, and have the uterus filled with blood held back until a sudden flooding, with collapse, places the patient "*in extremis*." The pulse and general condition of the case demand constant care to detect and avert hidden dangers.

The condition of the uterus as to its outlines is to be observed. Can we perceive the fetal contour, or have we the doughy mess caused by blood distending the cavity? The pains that have been materially weakened will hardly inform us as to the progress of the labor, and we must be ready to grasp the fundus and exercise compression when demanded by sudden bleeding. Ergot hypodermatically, heat to extremities, stimulants and digitalis, strychnine, ether, also used hypodermatically, are all indicated to meet shock and sustain the powers of the mother, until dilatation can be effected and the womb emptied, and contraction secured by manual compression; also the use of the hot douche, vinegar or tincture of iodine within the cavity, or Faradaic current used. In but few cases will he be prepared with a proper armamentarium, as the hurried call demands prompt attention.

Accidental hæmorrhage usually occurs in the first stage of labor before dilatation has begun or advanced to any degree, and when we arrive, we may have to act decisively and promptly. Barnes' bags not being at hand, the tampon is urgently needed, and should, to be effective, be properly applied. If our obstetrical bag has iodoform or other antiseptic gauze, we can use this; if not, then strips of soft old cloth, wet with carbolized water or other antiseptic, will be the best material for the tampon. The patient is placed in the left lateral or "Sims' position," with a Sims' speculum inserted; clear the vagina quickly of clots, and with the dressing forceps carefully place the pledgets of cloth within the os uteri, firmly packing it. Next, in concentric manner, place the pledgets around the cervix in the cul-de-sac and

firmly fill the vagina, gradually withdrawing the speculum as you fill the cavity. Do not, however, compress the urethral orifice. Apply a compress and bandage brought around the patient's shoulders, and carefully await until you can interfere and deliver, or proceed to a natural expulsion of the foetus.

The compression of the tampon upon the exsanguined cervix is not free from danger, for in Case IV I had severe sloughing of the cervix that I am inclined to attribute to such pressure. That portion of the tampon in the posterior vaginal cul-de-sac was not removed until after the birth of the infant, and as the head descended it compressed the lip of the cervix, and necrosis resulted. True, such conditions occur when no tampon has been applied, and the necessity of the case compels its use; but I note the effects in order that others may profit by my experience.

The mortality from accidental hæmorrhage is naturally large. Goodell's 106 cases collected places the maternal mortality at 54 per cent.; foetal mortality at 94 per cent. These are appalling statistics. Those who have encountered such cases will appreciate the fearful significance of the figures and the dread ordeal through which they have passed.

18 *Montague Street.*

ART. II.—Resection of the Optico-Ciliary Nerves.

By **JULIAN J. CHISOLM, M. D.**, of Baltimore, Md.,

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This operation, which is so valuable in many cases, seems to have been abandoned by some ophthalmic surgeons without sufficient cause. That accidents follow any operation, even the most simple, is an every-day occurrence; and, in the nature of things, must be occasionally looked for. Under careful manipulation, which every surgeon is expected

to exercise, failures should become more rare, and therefore should be very seldom met with.

Simple nerve-section, as a surgical procedure, is not always a radical method of relieving pain. Even when a considerable portion of a nerve has been excised, sensation has been, in time, regained, with a return of the suffering for which the operation had been undertaken.

To this experience the ciliary nerves are not exempt, and yet they possess many peculiar advantages for a successful section. Their location, so easy of access; their isolated surroundings; the small extent of incision required; the small amount of blood lost; the loose connective tissue in which the nerves are imbedded, permitting a considerable separation of the divided nerve-ends by the accumulating blood pushing forward the eye-ball and forcing backward the socket tissues; then the displacing of the delicate ciliary nerve-threads when pressure is made on the protruding eye ball by a firmly tied bandage, are all most valuable considerations for securing a favorable result.

In nerve-section, as usually undertaken, the nerve is either imbedded in a dense fibrous tissue, so that the separation of the cut ends must be very limited unless they are dissected away from each other; or the affected nerve traverses a bone, and, therefore, is difficult of access; or it accompanies large vessels, and it is necessarily dangerous to divide unless isolated by a careful and often tedious dissection. The nerve-attachments of the eye seem especially arranged for easy section. They are clustered together in a very isolated manner. For a long distance they traverse the central axis of an ample cone, which is only filled by an unimportant cellular tissue. In the midst of this, they can be easily, speedily, and surely reached without detriment to any important structures, if ordinary care be taken by the operator. The contiguous vessels are all small; consequently, no serious hæmorrhage is to be feared. The very looseness of the fatty tissue upon which the eye rests facilitates the wide separation of the nerve-ends, when the escape of blood from the divided vessels accumulates in the socket.

This blood-pressure so disarranges the free ends of these conducting threads that their readjustment is very improbable; and yet we know that this reunion sometimes does take place. This is the only accident that should follow this simple, safe and useful operation.

I do not propose, in this paper, to give a detailed history of optico-ciliary neurotomy; nor the various methods adopted by surgeons to divide or resect these nerves. My object is to give my own personal experience with this operation, from the year 1879, when I first performed it. From that time I have used it annually, as proper cases offered, until my experience now covers eighty-one operations—a sufficiently large number from which to draw safe conclusions.

In my early practice, I tried the various methods of muscle-section to facilitate the exposure of the nerve. I soon found that they complicated needlessly the operative manual, and made a very tedious and serious operation of what should be a very speedy and simple one. When the muscles were tenotomized, and afterward sutured, the tension put upon the threads by the blooded clot accumulating behind the eye-ball would often tear out the sutures, or so stretch them as to produce an ugly strabismus—an after-result that is not satisfactory.

As I was performing this nerve-section only for the relief of pain, I did not see the need of taking away a piece of the optic nerve, nor could I see what special advantage would ensue should I bring this nerve under observation while I was dividing it. Therefore, at a very early date I abandoned all needless manipulation, and adopted the simplest way of finding the nerve, with the least disturbance of the eye-attachments. I found that the nerve could be easily reached through a conjunctival incision made at the inner or outer canthus, below or above, and parallel with the inner or outer rectus muscle. This method I have exclusively adopted for many years. It makes the operation so easy to both surgeon and patient that it might be utilized in every case of a comparatively good-looking, lost, and pain-

ful eye, which would otherwise be condemned to enucleation. It was never intended, by a neurotomy, to replace, in all cases, the removal of injured eyes. The majority of lost and painful eyes are so disfigured by the accident, or by subsequent inflammation, that they are disfiguring as well as dangerous, and are not worth preserving. There are yet left in the list of lost eyes quite a number so little deformed that no one would willingly give them up were they not the cause of constant suffering. It is for this class of eyes that the operation of neurotomy is especially applicable.

My method of procedure is as follows: A general anæsthetic is always administered. I have used cocaine for socket operations, but it has never given to either myself or the patient the satisfaction expected. For neurotomies, which are quick operations, I use the bromide of ethyl, because of its prompt and evanescent action. By a very few full inspirations of the ethyl ether, during a period that does not exceed one minute of time, the patient is completely anæsthetized. A speculum keeps the lids apart. A fold of conjunctiva is caught up by the forceps, and is cut across in such a way as to make a horizontal incision which extends from the lower and inner border of the cornea to near the caruncula. It lies parallel with the lower border of the inner rectus muscle, and is but little more extended than the conjunctival incision for squint operations. The application of the points of the scissors in this orifice opens the capsule below the rectus muscle. An instrument terminating in two small hooks is passed into the depth of the wound and planted well back in the sclerotic. By drawing upon this instrument, the eye-ball is rotated forcibly outward, which brings the optic nerve, with its ciliary nerve surroundings, within easy reach. The curved enucleation scissors is now introduced through the wound into the socket directly behind the eye-ball. With its closed blades playing the part of a probe, the resistant optic nerve is sought. When it is found, by drawing the scissors forward until the nerve escapes, then opening the blades widely, the optic nerve, with its entire surroundings, can be

caught in the jaws of the instrument. The resistance made during the section is proof that the nerve has been seized; and if the scissors have been properly manipulated, it ensures the complete division of the entire cluster of nerve-cords. As an evidence of this, the closed scissors can now move freely, as a probe, in all directions, behind the eye-ball, without meeting any impediment. To ensure this complete severance, needs some familiarity with the resistance which the optic nerve makes to the section. The scissors must not be allowed to slide backward during the section, but the jaws of the instrument must be held firmly against the resisting body. The operation is now completed, and the scissors are withdrawn.

In the minute necessary to perform the entire manipulation blood has been pouring out of the divided ciliary vessels. It has been pushing the eye-ball forward, and it has also been escaping out of the wound. If this hæmorrhage be not at once stopped, the eye would become exceedingly prominent, in forced exophthalmos, with quite enough tension to cloud the cornea and threaten its future safety.

Without loss of time, the speculum is withdrawn, and a large compress is firmly secured over the eye by a bandage. In one or two minutes, consciousness returns, and the patient goes to his bed. As the after-pains of the pressure-bandage are annoying, a hypodermic of morphia is administered before the patient leaves the operating table. Pressure over the eye is kept up for several hours, or until all hæmorrhage from the divided vessels has ceased. This heavy compress is exchanged the next day for a simple dry dressing. Blood always infiltrates the conjunctiva and the lids, so that the surroundings of the eye are very much blackened from extravasation. It requires at least two or three weeks before this discoloration is altogether removed.

The pains in the eye disappear promptly with the nerve-section; and, in my experience, permanent relief is usually secured. The patient has had preserved to him a good-looking eye, that is worth all the risk of having the pain

return to it at some future time, when the more radical operation of enucleation, if demanded, can be performed.

Should this second operation not be required, he has been saved the constant thought of having been mutilated, which embitters his whole future life. He also escapes the daily annoyance of using an artificial eye, which gives a lot of trouble, as every wearer of one too well knows.

Too many good-looking, but dangerously painful eyes, have been enucleated, when this much preferable operation might have been substituted. I am fully aware of the many accidents which have occurred in the experiences of other ophthalmic surgeons—how hæmorrhage has been excessive; how dangerous, and even fatal cellulitis has followed the exposure of the ocular tissues; how the cornea has sloughed, and endless troubles engendered, as the sequel of the operation.

I will only say that, in my large experience, no such accident has happened to me. I may have avoided many of them by using, at all times, sterilized instruments; also by discarding, at an early period, the more serious exposure of the socket-tissues by not doing myotomies, nor by being desirous of bringing the optic nerve into view, so as it were to make the section under the eye. I always felt that this bold—I am rather disposed to call it by its proper name, *rash* dissection, invited the serious accidents which afterward followed.

Unfortunately, I am not able to trace all of my cases. Several of them I have seen at intervals of several years after the nerve-section. They had enjoyed life undisturbed by any return of the former pain. Others promised to report promptly should they not be comfortable. From these I have not heard, and therefore presume that they have had no occasion to write. In only four cases, coming to my knowledge, has it been necessary to perform enucleation.

In suitable cases, I feel assured that neurotomy is far preferable to the mutilation of enucleation. I think that this will be accepted by all without a dissenting voice, if the dangers which some have met with can be avoided. This

can be, in a measure, secured by adopting the simpler operation without cutting the muscles, which, when properly performed, is, in my experience, equally effective with the more complicated methods, and with much less risk. It is also an operation which even the most timid patient will accept.

Notwithstanding the dangers ascribed to neurotomy, many of which are avoidable, I think it would be well if those who have discarded this good operation would put it again on their list of available methods.

Knowing its defects, and also familiar with its many advantages, were I required to make a choice between the two operations, enucleation or neurotomy, for a member of my own household, I would not hesitate a moment in the selection, and would accept the neurotomy.

ART. III.—Radical Surgery the Best Surgery in the Treatment of Extensive Lacerated and Contused Wounds of the Extremities for the Prevention of Tetanus.*

By EVERARD HAMILTON RICHARDSON, M. D., of Atlanta, Ga.

In this paper the effort will be made to show that, notwithstanding the brilliant results achieved by antiseptic surgery during the past decade and a half, the tendency to establish the doctrine that conservative surgery is the *ultima thule* in the management of every class of wounds, including severely lacerated and contused wounds of the upper and lower extremities, is a pernicious one, fraught with great danger to the lives of very many of the subjects of this class of injuries.

When old and distinguished surgeons declare with eloquent zeal to medical audiences, composed largely of junior members of the profession, "that in a retrospect of their experience and recounting of the number of limbs sacrificed under old methods of treatment, they would like to dig up some of their sacrificed limbs and try them over again

*Read before the Forty-third Annual Session of the Medical Association of Georgia, in Columbus, April, 1892.

under modern antiseptic surgery," they little dream of the harm to humanity that the promulgation of such teaching is calculated to produce. The fact that Lister has by *asepsis* and *antisepsis* revolutionized surgery and produced marvelous and phenomenal results not dreamed of in the philosophy of surgery, previous to the inspiration of Joseph Lister, has made it very natural for surgeons to err on the side of conservatism, and has awakened a feeling of overconfidence in their ability to save limbs after lacerated and contused wounds; and the effort to save limbs has too often resulted in the loss of life from *traumatic tetanus*.

We do not think it can be gainsaid that the tendency of *antiseptic surgery* is to lead its devotees to err on the side of conservatism. In the management of this class of injuries, it is eminently proper for the surgeon to "ponder boldly" and consider "all the woes we see, and worse, the woes we see not."

The liability to tetanus after severely lacerated, contused and punctured wounds of the extremities, is well known by all surgeons of large experience. Its occurrence after minor lacerated, contused and punctured wounds of these parts is also well known; hence its prevention is the highest duty of the surgeon. Indeed, the great mortality of *traumatic tetanus* is so appalling, and its treatment after development so futile and discouraging, that means for its prevention should challenge the surgeon's supremest effort.

In the face of Sidney Smith's declaration that "there is nothing so unreliable as figures, except facts," let us for a moment consider the mortality of *traumatic tetanus*.

Conner states that, "taking all the traumatic cases of tetanus together, as met with in military and civil hospitals, the death rate may safely be placed at not less than eighty per cent. Of 1,332 cases reported from the wars of the last thirty years, 1,062 proved fatal." Of 363 cases in the civil war between the States 336 died."—(*Gross*.)

Gowers places the mortality at nearly ninety per cent, saying, "that it is rivalled by few acute diseases and excelled among its congeners only by hydrophobia."

Emphasizing the statement that "a very large proportion of those who are attacked die," in this connection it is interesting to remember, that after the first months of infancy "up to five years of age children enjoy almost entire immunity from tetanus."

"In the thirty years of life, from ten to forty, about three-quarters of the total number of cases occur." Dark skinned races are more subject to it than any other race; and it occurs, too, vastly more frequently in hot than in temperate or cold climates.

Poland declares, "that there is scarcely a well authenticated instance of recovery on record from traumatic tetanus." Gross—the Nestor of American Surgery—in commenting upon the prognosis of *traumatic tetanus*, avers that, "in the great majority of cases death occurs from the third to the fifth day: and if an instance of recovery is occasionally met with, it only goes to confirm the general law of the mortality of this affection. In an experience of fifty years I have seen but three cases where the patient escaped with his life, and then only after a protracted and painful struggle."

The ultimate causal factor in the production of tetanus cannot as yet be considered as definitely settled. This question is still *sub judice*: but the experiments upon lower animals of Carle and Rattone, and later of Nicolaier and E. O. Shakespeare render it probable that tetanus is produced by a specific *bacillus*; and to belong, like hydrophobia, to the class of infectious diseases. Further investigation, however, is necessary to establish their views.

But, be this as it may, the relationship of tetanus to lacerated, contused and punctured wounds and the prevention of its development, alone concerns us in this paper. How to minimize and prevent the occurrence of tetanus after wounds, is a subject worthy of the profoundest endeavors and the most assiduous efforts of the medical profession.

In order to accomplish this object in every severely lacerated, contused and punctured wound of the extremities, impairing the integrity of and exposing nerves, tendons, fasciæ, vessels and bone, make no attempt to save a finger,

toe or extremity, but place the patient, without delay, under the best hygienic surroundings, and get rid of the offending member by *immediately amputating* above all injured structure. All punctured, lacerated and contused wounds of the extremities, and whenever practicable in any portion of the body, should be laid open, all foreign substances removed, lacerated and contused tissue excised, free drainage established, and convert them into *simple incised wounds*, and treat them antiseptically. Punctured wounds, from blunt instruments, rusty nails, etc., however trivial, should be treated upon these principles. The liability to tetanus after incised wounds is comparatively slight.

"Tetanus is rare after operations."—(*Gross.*)

"Tetanus but rarely occasions death after operations."—(*Erichsen.*)

Remove every cause calculated to depress the feelings of patients; avoid fatigue; drafts of air, cold and damp, favor the development of tetanus, and should be scrupulously avoided.

In view of the liability to tetanus after this class of injuries, the do-nothing treatment, so often practised, and the waiting-for-developments plan are reprehensible in the extreme, and cannot be too strongly condemned. The rules enunciated in the management of the class of injuries under consideration should be religiously enforced whenever practicable. A flippant disregard of them can be but the result of the grossest ignorance, or due to a want of a proper estimate of human life. By the proper observance of these rules, coupled with antiseptic surgery, it is no Utopian dream to indulge in the belief, that this monster of disease, *traumatic tetanus*, will be banished from the catalogue of diseases, and in the future become one of the curiosities of surgery.

Dr. S. L. Barr, of Cavour, Dak., writes: "When a patient asks me if I can cure his or her headache I unhesitatingly say yes, and do it with Peacock's Bromides."

ART. IV.—Case of Idiosyncrasy from Ipecac, with Remarks.*

By EDWIN L. MORGAN, M. D., of Washington, D. C.

While stationed on the frontier at an Indian agency, I was called to see Mrs. K——, a handsome quarter breed woman, age about 48 years, who was suffering from a violent attack of bronchitis, which confined her to the house. I gave her a six ounce cough mixture containing one ounce of the syrup of ipecac. She was immediately seized with a violent, obstinate, and prolonged attack of vomiting each time she took a teaspoonful of the mixture. I had to omit ipecac in her cough medicine, so susceptible was she to the smallest quantity of it. I had tried in her case a number of experiments, always with the same result, though somewhat modified by the quantity used in each dose. She suffered from no other bad effects of the ipecac.

Mrs. K—— was always a sufferer more or less during the winter and early spring from laryngitis (losing her voice for several weeks), bronchitis, frequent attacks of coryza, and occasionally rheumatism. Her grandchild, about a year old, sick about the same time, showed a remarkable tolerance of the syrup of ipecac, having been given, at different times, in doses varying from a teaspoonful to table-spoonful, and repeated. In fact, I gave one dose of more than a half an ounce, and another still larger. I was unable to vomit this child with the syrup of ipecac, but used another emetic with the desired effect. This preparation of ipecac in the child's case acted as a sedative. The only effect it had was to make it drowsy and cause sleep for several hours. It caused no action on the bowels, nor did any bad effects follow the use of the drug. When the large doses were given to the child, previous experience told me it would be useless to use a small dose. The tolerance and intolerance in the child and grandmother were well marked so far as the syrup of ipecac was concerned. The same preparation was used in each case.

The subject of idiosyncrasy from ipecac has so much of interest in it to me that I have thought mention of other cases would not be without interest to others.

Mr. F——, a druggist of this city, age 50 years, has kindly given me a history of his own case regarding ipecac. He

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, May 9th, 1892.

began the study of pharmacy when a boy. He had always enjoyed good health, never being susceptible to catarrhal affections of the respiratory tract, nor had he ever suffered from any of these diseases. On one occasion, while weighing powdered ipecac root, he was immediately seized with paroxysms of sneezing, followed by asthma, which caused him in his alarm to rush out so as to get fresh air, so intense was his suffering. So susceptible is he to the unpleasant effects of the drug, that he cannot take any of its preparations, nor can he remain in his store when powdered ipecac is being dispensed, for he is immediately seized with paroxysms of sneezing, running from the nose, accompanied with itching of a most aggravating type, which extends to the nose, pharynx, mouth, and especially affects the tonsils. Owing to the itching principally, he felt as if he would like to tear out his tonsils, for the agony located in these glands was indescribable, and caused him to grasp the outside of his throat during his intense sufferings. His eyes itched, were inflamed, and large pouches formed on and under the lower lids; there was also a profuse secretion of tears. The itching extended along the Eustachian tube to his ears. Dyspnoea was well marked, with a sense of impending suffocation; there was a sensation of stricture around the chest, accompanied with a feeling of precordial oppression; the body was also bathed in profuse perspiration. Finally, from exhaustion, he would sink into a deep sleep. These attacks would last about four hours, leaving him with a cough and profuse expectoration, lasting for several days. On several occasions he had taken both the syrup of ipecac and the wine; as a result, he suffered with the same train of symptoms as were caused by inhaling the powdered ipecac, the itching extending down the oesophagus into the stomach.

Some years ago this gentleman had a clerk in his store who was, in a mild degree, susceptible to the unfavorable effects of powdered ipecac root. He could neither weigh nor handle the drug without being seized with paroxysms of sneezing, accompanied by an excessive secretion from the nose, lasting several hours. He had no other symptoms than those already mentioned.

Dr. William H. Ward, of this city, having heard his preceptor, Dr. Chas. H. Stevens, of Baltimore, say that the smallest quantity of powdered ipecac would produce an unpleasant train of symptoms in his case, tried the experiment of taking out the cork of a bottle of powdered ipecac root while the old doctor's back was turned, giving it a

slight shake, whereupon Dr. Stevens exclaimed, "You young rascal, you have opened that bottle of ipecac." The doctor was at once seized with paroxysms of sneezing, accompanied by a watery discharge from the nose, followed by an attack of asthma, which confined him to bed two or three days. This attack occurred during the month of September, which was clear, warm, and pleasant.

In the "*Annual of the Universal Medical Sciences*" for 1890, Volume V, page 85, Section A, is reported a condensed account of Ernest Sangree, case copied from "Times and Register," August 10th. Idiosyncrasy to ipecac. Nausea, vertigo and flushing of the face, caused by a dose little less than two drops of the wine of ipecac.

"Remarkable case of poisoning through the swallowing of inhaled dust of ipecac roots." Dr. Prieger. *Rust Magazine für das gesammelte Heilkunde*, 1830, pages 182 to 184. A man who was pounding the roots of ipecac, having occasion to cough, removed the handkerchief that protected his mouth and nose. He blew his nose several times and so breathed the dust and swallowed it with the saliva, upon which he vomited three times and had palpitation. He immediately stopped his trituration, yet an hour later had a heavy suffocating spasm of the glottis and œsophagus, death-colored face, severe mental anxiety, which attack increased in severity every minute. A physician was called in, who gave him a number of remedies, besides bleeding the man. The attack diminished, but after five hours returned with increased severity, so that for several hours he was threatened with suffocation from spasm of the glottis. After an hour's treatment he could breathe, but the difficulty of breathing persisted for several days, although the man was able on the second day to go out. The doctor supposed the ipecac to have been swallowed.

Dr. Sohon, who translated and condensed the above history of this case, believes inhalation to be the cause of his attack.

In the *Boston Medical and Surgical Journal*, December, 1843, Dr. Ashbell Patterson mentions the fact that Uriah Turner wrote an account of his own case: "Asthma caused by Ipecac." In Volume XXIX (of this same journal), page 13, Dr. Patterson narrates his own case as follows: He was a dyspeptic, having a tendency to diseases of the respiratory system. At the age of twenty he had a catarrhal affection, which "impaired" his sense of smell, and he was unable to

perceive odors unless very pungent. When twenty-five years old, he had occasional paroxysms of sneezing; the attacks coming on suddenly, "the convulsive effort was sudden," and often "painfully violent." Occasionally these paroxysms were accompanied with "dyspnœa, or a suffocating sense of stricture of the chest," "a most distressing oppression at the precordia"; there was a "harassing titillation of the nostrils"; at times nausea and convulsive but ineffectual efforts to vomit. On one occasion, having to administer ipecac as an emetic, he suffered the symptoms already mentioned. In ten to fifteen minutes "severe and convulsive paroxysms of asthma occurred, with a sense of suffocation, paroxysms of sneezing," lasting two hours, gradually subsiding with cough and expectoration.

At another time he entered a drug store where some powdered ipecac had been spilled on the counter and then brushed off with a brush. For half an hour the doors and windows had been open, and a current of air was passing through the store. In two minutes he was attacked as usual with sneezing, etc., and he was laid up for a day.

"A young man in his office transferred from a paper to a jar some powdered ipecac; in half an hour from that time he returned to his office, and his usual symptoms returned." He had a sense of exhaustion, suffocation, precordial oppression, extreme nausea, ineffectual efforts to vomit, spasm of the diaphragm, and muscles of the chest and abdomen. He could not use "Dover's Powder" without causing a convulsive and harassing cough, dyspnœa, spasm of the muscles of respiration on attempting to talk; "the predisposition to asthma was unquestionably produced by the early catarrhal affection already mentioned." The doctor goes on to state that fogs caused asthma in his case, but these paroxysms were in a great degree free from that sense of sinking, nausea, and spasms as caused by ipecac.

In the *Western Journal of Surgery and Medicine*, Vol. VIII, 1843, 2nd Series, pages 95-97, Felix Robinson, M. D., of Nashville, Tenn., relates the following case: While putting up a dose of powdered ipecac "was suddenly seized with a violent attack of asthma, attended with distressing dyspnœa and oppression at the precordia." Some time afterwards he became liable to asthma from other exciting causes, gave up his practice, travelled in Texas, sleeping out of doors in the open air, etc. He was gone from home six months; during this time he had no return of attacks of asthma. Roughing it would seem liable to cause the disease, yet it

had no effect whatever. "He returned home and resumed practice. His stomach, on one occasion, being deranged, he thought it advisable to take an emetic," the preparation being wine of ipecac. The moment he swallowed it, there was in his "throat and stomach a sensation" "indescribable, but as intolerable to be borne," which he described to be as if he had "taken a drink of melted lead." His suffering was so great that he was unable "to think of any method for relief; but with great agony he leaped out of bed and rolled on the floor from side to side of the room." He drank large quantities of warm water, which produced vomiting and somewhat relieved his intense suffering. "The distress subsided slowly," which was followed by an attack of asthma. Powdered ipecac by inhalation caused attacks, fumes of burning sulphur, "and the exciting causes seem to multiply with every return of the disease." If he entered a drug store shortly after ipecac had been handled, he occasionally had dyspnœa. He was compelled to give up practice, used snuff to lessen the irritability of the mucous membrane of the nose (as it seemed to commence there, extending to the bronchial tubes and ramifications.) In a year's time he was "nearly, if not entirely, well."

About three years after, he put some liquid on his tongue taken from a bottle supposed to contain wine of ipecac, "having about forgotten his previous experience." Instantly "that peculiar, burning, indescribable sensation was felt in the mouth, which rapidly extended itself to the fauces, and down the throat and bronchia." For two hours he was a great sufferer; had considerable dyspnœa, which gradually disappeared. The most remarkable fact is that ipecac was a favorite remedy with him, which he had always freely used until he had these attacks as a result of the use of the drug. One of the interesting points in his case was the great quantities of mucus—in fact, mouthfuls (when expectoration was free), would be thrown up in the morning, resembling transparent worms, which, on examination, proved to be thickened mucus that had collected in the small ramifications of the bronchial tubes during sleep, and were discharged as casts of those tubes. It is remarkable how the man could breathe, much less sleep, owing to the large quantities of mucus discharged in the morning on his stirring around.

Medical and Physical Journal, 1810, pages 199–203, Volume XXIII, Mr. B. refers to Mr. Spencer's statement, the "pernicious effects of ipecac upon his apprentice"; he then narrates

his own case: In 1787, while powdering ipecac roots, he was seized with sneezing, profuse "defluxion from the eyes and nose"; "these symptoms continued without intermission for many hours, accompanied by great heat and anguish throughout the cavity of the thorax, and the most oppressive dyspnœa." Being exhausted by this violent attack, he was carried to bed, and was supported, being unable to lie down. The next morning he was still suffering, and was very weak, "with all the usual appearances of a severe catarrh." Previous to this attack he had never been affected by ipecac; if so, he was never aware of the fact, but attributed the effects to a cold. From the first attack he suffered from catarrh. The slightest motion of the "simple or compound powder of ipecac" induced precisely similar, but more gentle effects. In weighing the powder, he was compelled to cover his nose and mouth, wearing the covering for half an hour after, for if he removed the cloth he had another attack. Finally, he had to leave his shop while ipecac was being handled. Should he enter the drug store of another, long after it had been handled, instantly he had a recurrence of these very distressing sensations. He had tried various methods of relief without success, except "copious draughts of warm water, which appeared to promote expectoration; as this increased, the symptoms became gradually less irksome."

Being already aware of the effects of the drug if inhaled, about a year from the first attack he took a dose of "compound powder of ipecac in the form of a bolus." He at once felt pains in the chest, dyspnœa, "but not so acutely" as when inhaled, and there was no sneezing in his case nor defluxion.

On one occasion, while coughing on the street, a friend presented him with a few "lozenges." On taking one, it had scarcely dissolved in his mouth, when he "felt a pungent roughness in every part of the mouth," causing a great secretion of saliva. This was not the case in preceding attacks, as the "excretory ducts uniformly denied their offices," there being a disagreeable dryness of the mucous membrane. "As this acrid sensation extended to the lips, they became prodigiously swollen and inflamed." On the fauces he "experienced the like effects," with a teasing, itching irritation. "It descended into the trachea," causing pain and dyspnœa. Likewise it proceeded down the œsophagus, causing slight heat in the stomach, passing "with moderate gripings," throughout the intestinal canal. Of all the

symptoms, the swelling and soreness of the lips lasted the longest.

Some powder was brought to his house, with an order to prepare some more of the same kind. Placing a small quantity on his tongue, he experienced the same symptoms as in the case of the lozenges, but in a milder degree. The prescription contained one grain of ipecac and ten of calcined magnesia. Afterwards he discovered that the lozenges contained ipecac, which idea suggested itself after tasting the prescription of ipecac and magnesia. He was liable to take cold, and his susceptibility to the action of ipecac varied but little until he was thirty years of age. The violence of the effects of ipecac has considerably diminished. The catarrhs occur at longer intervals, with increased difficulty of breathing and serious derangements of health. One of his parents was liable to catarrh, and at the age of forty had a severe attack of asthma."

The editor of the journal just quoted states that his father could take Dover's powder without having any bad effects, while the inhalation of ipecac affected him.

In the *Philosophical Transactions of London*, Volume IV, page 168, Dr. Wm. Scott narrates the history of his wife's susceptibility to the "effluvia of ipecac." When Mrs. Scott was in another room adjacent to one in which ipecac was being powdered, or dispensed, she would suffer from a certain train of symptoms, which she attributed to ipecac. Her husband regarded this idea as a fancy. Previous to her marriage, she enjoyed good health except about the time of her sickness, when she had nervous headaches that used to affect her temples. Some time after marriage, she complained of shortness of breath, stricture about the throat and breast; also a wheezing noise. These attacks came on suddenly; were often so violent as "to threaten immediate suffocation," causing spasm of the throat and chest. The duration of these symptoms were sometimes longer, and sometimes shorter.

June 3rd, 1775.—The doctor, forgetting his wife's susceptibility to the influence of ipecac, put into another bottle some of this powdered drug, she "not being far off at the time." Before the bottle was filled, she "called out she felt the ipecac." At once her throat was affected; she was seized with a sense of stricture about the breast and difficulty of breathing. She was advised to walk out in the air, but this did not have the desired effect. She shortly retired to bed,

being ill the whole night. At 3 A. M., she was gasping for breath at the window; "was pale as death;" her pulse could scarcely be felt. A number of remedies were tried for her relief without avail. She continued in this condition, "with few or no intervals of ease, till 9 o'clock that morning." Being almost exhausted, she fell into a "disturbed sleep;" "the difficulty of breathing, with wheezing noises, still continued, with little abatement." About 11 A. M., her breathing was still difficult, and her eyes looked red and inflamed.

Dr. Brown, "an eminent physician of Newcastle-on-the-Tyne, called on Mrs. Scott, and said he knew of "pretty much a similar case." Mrs. Scott was very ill, as the result of her idiosyncrasy to ipecac, for eight days. About five days after she was affected, her sickness came on, "although it was then only about the middle of the usual period."

She sometimes coughed up small quantities of blood; occasionally a small amount was found in her stools and urine.

Dr. Scott goes on to say: "Quincey, however, if I remember right, mentions its producing asthma."

Also Mr. Leighton, a surgeon and apothecary in Newcastle, says his wife is affected by the "effluvia of ipecac," and she suffers from the same effects as in the case of Mrs. Scott.

In the *Medical Physical Journal*, London, Volume XXIV, page 233-236, Dr. Wm. Scott also reports the history of his wife's idiosyncrasy in this journal (see *Edin. Med. and Ph. Com.*, Volume IV, page 75). In addition to the symptoms already mentioned, he says she expectorated a tough phlegm and had a disagreeable metallic taste in her mouth. She had several children.

In the same journal, page 60, T. Trotter, M. D., reports the case of the wife of his preceptor, who was seized with asthma when "ipecac root was pounding in the shop." Even when in a distant part of the house she was affected. She was a very nervous woman.

The wife of Dr. Buckland, of Wooler, in the same journal, page 233: Dr. Hall gives a history of this lady, and says the "effluvia of ipecac," when being handled, caused dyspnœa, etc., even when she was not in the room. She was not susceptible to other powders. He had heard of other ladies being affected by ipecac.

In the *Boston Medical and Surgical Journal*, 1850, Volume XLII, page 391, T. W. Sheriff relates his own case, having himself been affected by ipecac when respiring particles of the powder, as also when taking it internally; having had an attack of rubeola, attended with a cough and severe dyspnœa, being the second time he was affected with this disease. He had several attacks of severe catarrh, attended with asthmatic symptoms. In the spring of 1841 these attacks became frequent, and, although severe, lasted twelve hours, ending in a "copious secretion of mucus." He was alarmed at his condition, and was often puzzled to account for the asthma, these attacks coming on unexpectedly. His general health was good.

In the "*Cyclopædia of Practical Medicine*," he read an article stating that ipecac frequently caused asthma. He immediately prepared Dover's powders, and "was, in a few minutes, violently affected." He frequently repeated this experiment with the same result. When affected on former occasions, he obtained relief by smoking tobacco. Until the last six years he had often taken large doses of ipecac, and had constantly been compounding the drug without any bad effects. He attributed his idiosyncrasy to this drug as the result of the attack of measles. (*American Medical Journal*.)

In the *Medical News* of Philadelphia, Volume LIX, No. 24, page 629, Dr. James Mitchell gives an account of his idiosyncrasy to the drug ipecac. The smallest quantity of ipecacuanha in the atmosphere caused violent sneezing—"severe coryza"—accompanied with asthma. He abandoned the use of the powder, using the tincture. If, in dispensing it, he soiled his hands with a drop or two of the tincture, and failed immediately to wash them, a decided irritation was set up in those parts with which the soiled fingers came in contact. Having taken the drug internally several times, he "suffered with excessive nausea, violent vomiting and retching, accompanied by a sense of burning pain and colic in the abdomen." "Speedy relief" was obtained from the ingestion of castor oil.

Sydney Ringer, in his *Hand-Book of Therapeutics*, gives one of the best accounts of the physiological action of ipecac that I know of, which seems to apply, in nearly all its details, to the cases reported this evening. In speaking of ipecac, he says: "When applied to the skin, ipecacuanha, after some time, produces a sensation of warmth, attended with redness and the formation of papules. Sometimes, it even produces pustules, which, on healing, are not followed by pitting or scarring." * * "Excites the flow of saliva." * * * "In some persons, the minutest quantity produces peculiar effects on the membrane, covering the eyes and lining the nose and respiratory tract. On smelling the drug, or even entering a room where it is kept, they are affected with swelling of the loose tissue around the eyes, with injection of the conjunctiva, repeated sneezing, abundant discharge from the nose, severe tensive frontal pain of the head, much oppression at the chest, with frequent cough, and the signs and symptoms of bronchitis. Ipecacuanha thus excites symptoms and appearances similar to those occurring in hay fever—that is, it excites a certain catarrhal inflammation in the mucous membranes. It is highly probable that ipecacuanha produces similar results in all persons, and that its action on individuals differs only in degree."

There is no doubt that many persons are affected by ipecacuanha in the same way as those cases already reported. Yet comparatively few cases have been recorded during the last one hundred years.

There is another case reported in the *Medical News* that I have not mentioned. I examined the catalogues at the "Army and Navy Medical Museum Library" for all the cases to be found under the heading of idiosyncrasies to ipecac, and I have endeavored to give a condensed account of the history of those persons affected unfavorably by this drug. Doubtless many of these cases have not been catalogued, which I found to be the case in my researches, while still others may have escaped my notice.

1909 *Pennsylvania Avenue.*

ART. V.—What Shall we do With the Uterus after Abortions? *

By K. P. MOORE, M. D., of Macon, Ga.

Mrs. P., age about 32, a lady from Minnesota, while in one of our Southern cities this winter, had an abortion at the third or fourth month. In three or four days afterwards she was allowed to be up and on her feet. She was making a tour of the South, and hence was constantly on the go. Soon after her going about, she began to have a constant flow—sometimes more, sometimes less—and never at any time feeling well. About three weeks after the abortion she chanced to strike our fair city. During all this time the flow continued to increase, her strength to fail, and she was now forced to take her bed.

On March 4th, 1892, she was admitted into my private Sanitarium. I found her with a temperature of 102°F., pulse 130, with considerable pelvic and abdominal pain; some tympany and nausea; great uterine tenderness, and an area of tenderness and hardness on the left side of the uterus. There was a muddy, offensive, sanguinolent discharge. *Diagnosis*—Metritis, local pelvic peritonitis, with probable salpingitis. The next morning after her admission, the temperature was 103°, with a corresponding aggravation of all the other symptoms.

Could a more grave condition be presented? Every one who has had to deal with peritonitis, especially of an infectious or septic origin, realizes at once the serious outlook which surrounded this patient. The etiology and pathology are plain. There remains in this uterus portions of the uterine contents of the previous conception. Decomposition of these membranes and blood clots has been the source of infection.

What shall be done? We are taught by some authorities that the uterus is an organ whose interior is too sacred to be invaded. Here I have a bleeding endometrium with a septic discharge. Under ordinary circumstances, and on general principles, perhaps the most conservative gynæcologist would arm himself with a curette and attack the enemy,

* Read before the Medical Association of Georgia during its 43rd Session in Columbus, April 22, 1892.

although barricaded in this sacred fort and fortified by able authority against its invasion.

But, in addition to this condition of the uterus, we have here a peritonitis, which should be gently coaxed into submission by the most tender persuasion. Would not pulling on this uterus, dilating its cervical canal, curetting its interior, and otherwise roughly handling this organ, fire up afresh the local peritonitis, and make great risk of its becoming a general peritonitis? My anxious solicitude can well be imagined.

Do you ask what all this has to do with the management of the uterus after abortion? I answer, much every way. The precarious condition of this patient had its origin in a failure to do for her what should have been done at the time of her abortion; and, if she had died, to a certain degree, her death would, in my humble judgment, have been chargeable to failure on the part of her physician to do his *whole* duty.

In the early months of gestation, the large mass of deciduous membrane is apt to be retained after the ovum has escaped from the uterus. Even if the *bulk* of the mass has passed out, its firm attachment to the uterine walls renders the retention of *portions* of this mass quite probable. After the formation of the placenta, portions of this organ are also liable to be left, and these undetached membranes and tissues not only afford sources of sometimes constant and dangerous hæmorrhages, but, on account of their own decomposition, as well as the decomposition of retained blood clots, become a fruitful soil for the propagation of germs, and the inauguration of a septic condition hazardous to the life of the patient.

Two plans for the management of the uterus after abortions are recommended, and each has advocates of unquestioned ability. One, I might designate as the active or aggressive plan; the other, the conservative or expectant plan. I prefer to call it expectant rather than conservative, for my idea of conservatism is not merely to stand by and see a patient get well, and trust alone to *vis medicatrix naturæ*,

but true conservatism consists in *active* interference when necessary, and conserving the vital forces as far as skill and art, directed by sound judgment, can do it.

I would not be understood as discounting the opinions of those who advocate the expectant plan, and who hold that we should leave the matter to nature until a subsequent hæmorrhage or an odorous discharge should afford an indication for active interference.

Tarnier advises non-interference even if the whole placenta is known to be in the uterus. He insists that the uterus should be allowed time to expel its contents by due process of nature; but in the meantime he urges systematic anti-septic injections, and yields only to active interference when alarming hæmorrhage or a foul odor presents the indication for interference. In France, the burden of authority is rather in favor of the expectant course. Tarnier refers to the statistics of the Charité and Maternité, where he saw forty-six cases of retained placenta with only one death, and that from pneumonia; but in the hospitals of Florence, where the same course is pursued, the statistics show a death rate of six per cent. In Germany, while there is great division of opinion, the preponderance of testimony is in favor of active interference. Shröder says the abortion must not be hastened until the os is fairly well dilated and the ovum well separated from the uterus; but if any portion should remain behind, it must be invariably removed, even should the cervix have to be split on both sides to reach it. Fehling and Schwarz are also warm advocates of the active plan. Braun deprecates the early use of instruments, but advises the use of the finger whenever possible to remove the ovum. Dohrn recommends the expectant plan to the farthest limits, and Winckel advises no active interference.

In our own country, difference of opinion exists among men pre-eminent in their respective spheres. Such men as Mundé, Polk, Wylie, and others, are decided in their teachings as to the duty and importance of *active* measures; while Parvin, Thomas, and other leaders, whose opinions are always entitled to the highest consideration, are on the

other side of the question. Hirst, in the *American System of Obstetrics*, and to whose article I am largely indebted for the opinions of authors quoted, laconically presents the question in this way: "Is the retention of decidua, foetal membranes, or placenta after abortions, fraught with any danger to the woman? And is the immediate removal of the secundines after abortion necessarily a violent or dangerous procedure?"

In the decision of many matters in the practice of medicine, we are to make a choice of two evils, and it seems to me that we might present the question in this way: Which plan would be most risky to the patient—curetting and leaving the womb in a clean, well drained condition, or take the chances at leaving decidual or foetal remains in the uterus, and trust to the physiological processes of nature to rid herself of them? The answer to the question will depend largely upon the method pursued. If the active course is *properly* done, there is no question in my mind that it is our duty, under all circumstances, to leave the uterus entirely clean and free from any possible risk of subsequent infection from decomposing material. If, on the other hand, it is *not* properly done, then perhaps safety lies on the line of expectancy. Duhrssen has recently reported 150 cases of abortion, treated by an immediate and thorough cleaning out of the uterine cavity, with only two deaths, and these in no manner attributable to the treatment adopted. His proposition is to "treat the ovum before the third month of pregnancy like a polypoid tumor; and so soon as the os is slightly dilated, to introduce a curette and incontinently clear the uterus of its contents." Perhaps this is an extreme position, and I can see nothing to be lost by allowing a reasonable time for the uterus to expel its contents, and then curette. Hirst says that after the ovum is wholly or in part expelled, everything left behind in the uterine cavity, whether thickened decidua or placental tissue, is to be extracted. This strikes me as the true conservative course.

How shall this be done? Hirst recommends as the best

instrument, especially in retained placental portions, the *finger* of the physician, claiming that in this way the attached portions can be recognized and peeled off from the uterine walls and easily extracted. In this I take issue with this eminent authority. Who of us has not wrestled in vain to get away these attached portions when the uterus was out of reach, and with much difficulty the finger was barely introduced; and though the sense of touch acquainted us with the presence of foreign remains, yet we found it impossible to manipulate the finger sufficiently to detach them? Besides this, it is not possible to do the operation with the same degree of cleanliness and as antiseptically with the finger as with the curette. The curette, speculum, depressor, tenaculum forceps, and every necessary instrument can be made absolutely aseptic by boiling, which could not be done with the finger. Again, however careful we may be in cleaning the vulva and vagina, there would be some probability of conveying germs into the uterus on even a thoroughly cleaned finger, which need not be the case with the curette, for the curette need never touch the vaginal walls or external genitals at all.

How should the operation be done? It is an operation, and should be so regarded whenever attempted. Not only should it be regarded as an operation, but as one involving vital issues, and entitled to as much care and precaution as a laparotomy or any other capital operation; and when these precautions are taken, in my judgment, the records will show 100 per cent. of recoveries.

It has been the custom of myself and excellent co-partner for some time to pursue the active plan in every case of abortion that has come into our hands—and we have had quite a number; and the results have been so satisfactory that we would now almost feel ourselves criminal to neglect the use of this plan.

The simplicity of the plan and the meager supply of instruments actually needed places the operation within the reach of every practitioner. The necessary instruments are a Sims' speculum (I prefer a Mundé's or Taliaferro's modi-

fication of Sims'), a dual curette, a uterine or vaginal depressor, a pair of applicators or uterine forceps, and a pair of tenaculum forceps. These should all be put into boiling water for ten or fifteen minutes before use. This secures thorough sterilization. The vulva, mons, and insides of the thighs should now be made absolutely clean with soap and water; also thoroughly irrigate the vagina with the same; wash the genitals and vagina with warm solution of bichloride-mercury about 1:3000. Now place the patient in an exaggerated Sims' position, with the hips close to the edge of the table or bed (we have always used the bed). Through the speculum place a large pledget of absorbent cotton (which has been soaked in the mercuric solution) against the cervix and allow it to remain here to take up any oozing, as well as to guard the cavity until other preparations are completed.

We now prepare a strip of moist iodoform gauze, about one inch wide and three feet long, for filling the uterine cavity, and another strip six inches wide for the vaginal cavity. These can be dropped into hot water or the mercurial solution, if deemed advisable, but if the gauze has been well kept in a sealed can, and is quite moist, I do not feel that it is necessary to further sterilize it.

Perhaps, as a general rule, it would be well to use an anæsthetic, as it not only saves pain and economizes nerve force, but it places the patient entirely in your hands without resistance, although it is not a necessity to use the anæsthetic, as we find most of our patients prefer not to use it. We are now ready for curetting.

Remove the cotton from the vagina, and with the tenaculum forceps gently draw down and steady the uterus, while its entire cavity is thoroughly curetted. If the cervical canal is not large enough to permit perfect freedom in the use of the curette and to secure free drainage, it should be well dilated before commencing. Now irrigate the uterus with warm sterilized salt water, and wash out all the *debris*. An ordinary soft rubber catheter attached to a pump or fountain syringe will answer every purpose. Of course

there should be plenty of room for the re-flow by the side of the catheter. When the uterus is cleared of its contents and well washed out, sprinkle the narrow strip of iodoform gauze with tinct. iodine, or Lugol's solution, and pack the uterine cavity with it, leaving the free end in the vagina to facilitate its removal; then sponge out the vaginal canal with bichloride solution, and loosely fill the vagina with the wide strip of gauze. This completes the operation. The dressing is allowed to remain from twenty-four to seventy-two hours. I have never found the slightest odor after removing the dressing, and have never had a case that did not go on to speedy recovery without a single unpleasant result. I direct a warm salt vaginal douche every day for a week or more, although there is usually but little discharge, and involution goes on rapidly and healthfully; and I have no fear of subsequent hæmorrhage, sub involution, or chronic metritis.

Free drainage is one of the fundamental principles of successful surgery, and is, if possible, more applicable to gynæcological than general surgery.

In the case reported in the beginning of this paper, I promptly gave the uterus a thorough curetting and irrigation. In three hours' time, the temperature fell from 103° to below 100° , and the patient went on to a complete recovery, and in seven weeks was speeding on her journey to her far-away western home.

In curetting this uterus, I incurred the risk of firing up the local peritonitis into a general conflagration of the whole peritoneal cavity, which, as we all know, would mean death. Yet, what hope was there in leaving this smouldering source of infection, and which has already superinduced a constitutional septic condition, and would only feed the localized peritonitis into a general one?

I have somewhat digressed from the subject in dwelling upon the treatment of this case, for I have not intended to treat upon chronic metritis, or endometritis in any of its forms. The object and scope of this paper is rather to suggest the means of preventing these conditions. And I am

firmly fixed in my convictions that if properly done in every case, the per cent. of uterine troubles would be largely decreased, and gynæcologists would have less work to do.

In our day, when abortions are so frequent, and when the question of how to avoid procreation seems to be the great problem of our social system, this question looms up before us with no ordinary proportions.

In the time allowed me for this paper, I could spare but little space to the management of the case after the first operation. Upon the principle that "cleanliness is next to Godliness," I would feel that this paper was incomplete if I did not drop a word or two of caution on this line.

In the subsequent management of the case, the syringe is our chief remedy; and yet, if not properly looked after, it may become one of the most fruitful sources of infection. To use a political figure, the neighborhood syringe is a regular mugwump, and is in every party who may chance to want a douche or an enema. It would not take a microscope to find upon the nozzle of every household syringe several layers of gummy pus, mucus, blood, fæces, urine, dirt, etc. Caution to the nurse along these lines will not be sufficient. Personal inspection is the only safeguard, and will pay a large dividend upon the time and attention of the attending physician. The sterilization and straining of the water used as a douche will be time and trouble well spent.

One other caution, and I am done: Do not allow your patient to be in too great a hurry to get up. Two or three days too long is very much better than two or three hours too soon.

In conclusion, I wish to acknowledge my indebtedness to my enterprising young co-partner, Dr. James T. Ross, for much of the enthusiasm which has prompted the inditement of this paper, and for many practical thoughts and suggestions in our private discussions of this subject.

ART. VI.—Typhoid Fever—Its Pathology, Etiology, and Treatment.*

By G. M. BAZEMORE, M. D. of Cleveland, Tenn.

Not wishing that you be entirely without something for to-night's discussion, I will say a few words on "Typhoid Fever: its Pathology, Etiology and Treatment," as I understand it, but in a different light from that presented to this Society a few nights ago by an esteemed friend. He says, "We have to deal with a specific morbid principle—a living entity—a micro-organism entering the body occasionally through the air passages, but almost always passing into the alimentary canal with food or drink. Here it multiplies, and during its life produces certain phenomena that are manifested to us as the symptoms of typhoid fever."

The profession agree that we have to deal with a morbid principle—a micro-organism entering the body; but we do not all agree that that living entity enters the body "occasionally" by the air passages, and "almost always" by the food and water. If this morbid principle is not in the air, then it cannot enter the air passages at all; if it is in the air occasionally, it may enter the air passages occasionally. If it is in the air altogether, it must enter the body through the air passages altogether.

An epidemic disease is referred to some particular condition of the atmosphere, with which we are utterly ignorant: hence the idea of cleanliness, fumigation, and disinfection of the sick room, as well as the patient. The micro-organisms found in the food and drink would hardly jump from their original breeding place, from their elements (food and water) and hide in clothing, cracks, or paper on the walls, awaiting some opportunity to get in some food or drink, to enter the body, and again develop typhoid fever. Has the profession discarded cleanliness of patient and sick room since the discovery of this living entity in food and drink?

If Pasteur, Beaumetz, and their successors continue their

*Read before the Bradley County Medical Society, June 7th, 1892.

efforts along the line of the micro-organism, will they in the "sweet by and by"—200 years from now—be able to exhibit better results than the deluded men who have so eagerly studied the micro-organism theory, for the last decade? Certainly not, if analogy and lack of success up to the present, form a criterion for safe judgment.

That the microbe doctrine, as a cause of disease, is erroneous, may be clearly seen by a careful examination of the claims of its authors. For instance: *in relapsing fever*, the blood swarms with a particular form of bacteria. But Baumgarten tells us frankly, that they disappear synchronously with the fever. Now, as there is no pretense that they were destroyed by medication, it seems conclusive that they were the offspring of the fever, and of necessity died with it.

In cholera, they find the comma bacillus not in the blood, but in the intestinal canal. That it is the result of the fecal discharge, peculiar to that disease, I see no reason to doubt.

In this connection, I will note the fact that in an epidemic of cholera near Calcutta, it was discovered that all persons attacked had been using water from a tank where the dirty linen of two cholera patients had been washed. On further examination, it was discovered that a multitude of these bacilli were in the tank, not distributed through the water, but clustering upon pieces of *rotten wood, and other forms of organic residua*. Now, this is instructive; it is strong proof that they cannot exist, save in connection with dead or decaying matter, as the fungus thrives on a rotten stump. That reminds me of the old story of the monk's meeting cholera, and asking: "Where are you going?" Cholera replied, "I am going to Egypt to kill my 20,000. On cholera's return, the Dervish again met it, and said, "You liar; you said you were going to kill 20,000, and you have killed 90,000." Cholera replied, "I have kept my promise, and have destroyed only 20,000; fear killed the rest."

That word ptomaine—what is this great something? What does it mean? It is a term used to designate certain

toxic substances (resembling alkaloids) which are produced during the process of putrefaction; and when injected or inoculated into the system, produces—what? Not bacillus-typhosis, but sepsis or poison to the system—the inevitable result being sickness or death, as we might well expect.

In pulmonary tuberculosis they are bold enough to claim that tubercle never exists, save where the special bacillus of this disease has preceded it. Yet, their system of propagation exhibits the fact that it cannot live, save in a temperature of from 90° to 104° ; and as the temperature of the body, in health, is but 98.6, with no proof of an increase of temperature previous to the development of tubercle, this fact alone is conclusive evidence that their theory is a myth—that the bacillus is a result of the tubercle or the abnormal condition that caused it, and not a pathogenic cause.

In typhoid fever a bacillus typhosis has been discovered.

Of all the self-limited diseases, this fever runs the longest course. The blood becomes greatly changed, and as might be expected, microbes are developed and thrive upon the debris which it carries. But that they are not the cause of the disease is proved by four important facts.

1. They are never found previous to the disease.
2. The inoculation of animals with these bacilli will not produce typhoid fever.
3. Although they may exist in the blood by the legion, they are not known to be specially harmful, even if they are in the least injurious—the gravity of the disease being in direct proportion to the intestinal lesion.
4. That they disappear as the vital forces of life gain ascendancy over the disease, is the strongest possible proof that they are the product of the disease.

Now, let us consider for a moment the culture soil, in which they propagate their microbes. Is it not a dead medium? As such, is it not an organic poison? And if injected into the body of man or animal, could we expect anything but sickness or death? This phase of the subject

is well illustrated in their attempts to produce typhoid fever by inoculating animals with culture soil or dead blood containing bacillus typhosis. They did not produce typhoid fever, but did produce death by blood poisoning, as might have been expected.

But there is one thing these propagators of the microbe take more pride in than their portrayal of what they call the triumph of Pasteur in sapping and overthrowing the theory of Liebig in regard to fermentation. Pasteur claimed to demonstrate that the microbe was a factor in the process of putrefaction, as well as fermentation. But no one would deny this, and it proved nothing as to disease. But his devoted friends claim that he also demonstrated that the microbe produced fermentation. But this idea was a misconception; he never did, nor never will prove anything of the kind. All must admit that these are natural laws; fermentation and putrefaction are as much in nature's formula of processes, as are evaporation of water, and the condensation of vapor; and in the laws of the physical world it has not yet been claimed that the microbe is an essential factor, much less the essential cause.

But there is another organism, not microscopic, seen in connection with fermentation, of which I have seen no mention. It is the gnat. Take a bottle of wine, uncork it, tie a piece of thin cloth over the mouth, and put it in a warm airy place; soon the acetic fermentation will commence, and then you will find many gnats upon and hovering around the cloth that is moist with the vapor arising from the fermenting liquid. But you will not see one of them previous to the process of fermentation. They are, like the microbe, a result, and not a cause of the process. And so with the yeasty fermentation of the human stomach—it exists only as a morbid condition of the stomach that preceded it. It is impossible for the yeast plant, as a vegetable product, to exist in any portion of the human body, while the enervation of that portion of the body is incomplete.

But if we were to admit all that these gentlemen claim in connection with fermentation and putrefaction, it would not in the least uphold their claim for the microbe as being

the pathogenic cause of disease. Why? Note the words of Beaumetz, one of the leading disciples of this fallacy, in application to this point:—"When life has ceased in a living organism, it gives place to another sort of life; the body is invaded by microbes, erobic and anerobic, which give rise to successive generations, bringing about, little by little, the combustion of the entire organism."

Here is a frank admission that death preceded the microbe. His cadaverous work is, as a necessity, post mortem.

Putrefaction is but a continuation of the death process, and by their own testimony, the microbe of animal decomposition is a post-mortem product. This simple fact topples over their whole doctrinal structure, for the corner stone, on which they built, was Pasteur's assumed success in demonstrating that fermentation and animal decomposition were the result of their respective micro-organisms.

Many surgeons have a favorable opinion of the microbe doctrine, that they have formed from the standpoint of Lister's antiseptic surgery. But, has that new form of surgery—costly and troublesome—ever saved a single life? It is to be hoped so, at least, in order to balance the account, for it is a matter of record that it has destroyed life by poisoning. But suppose we admit the benefits claimed for antiseptic surgery: does it of necessity follow, that the good results are secured by destroying the micro-organisms that infest the diseased parts? No: it may be a good thing to kill them when they exist; a better thing still to prevent their inception, and this by following a principle that is not spoken of in the premises—that of stimulation of the local nerves, for the suppression of a morbid discharge.

Almost without exception the antiseptic remedies are stimulants of the organic system of nerves, and it is by the suppression of the discharge, that the micro-organisms that germinate and feast upon it are inhabited.

In the treatment of typhoid fever, we further come to a halt. My friend would say "that antieptic treatment gave him the best results." In what way does any medicine affect the micro-organisms? Are they at their seat of

repose by direct contact with the medicine, or by the antidote being carried through the circulation? Again, must this living entity be destroyed by medicine, in order to get rid of it, or is it a self-limited organism?

Again, if this living entity is in the body, if the typhoid bacteria are in the intestines, and their presence dries up the secretions of the digestive glands, in what way does cool or cold baths affect these intruders in the body? In treating typhoid fever, my friend would, I suppose, order his patient to be sponged daily with luke warm water to cool water and vinegar, then have the body well rubbed with a dry towel; no doubt have the patient's clothes changed every day, and the bed clothes aired daily, if possible; also all urine and fæces removed from the room as soon as possible, and the air purified by burning resin, tar, branches of pine or cedar, or dried apples, sugar, or sulphur. In some patients the odor of the typhoid fever is so strong that he notices it the moment he uncovers his patient; some, indeed, of this nature have to take chloride of lime scattered about the room to make the atmosphere more bearable. Why? For the benefit of his patient, but more particularly for the benefit of himself and the other members of the family. "An ounce of prevention is worth a pound of cure."

But if this typhoid fever poison, if this living entity is not in the air, but in the food and drink, and almost always passes into the alimentary canal, then, in the language of King David, "I have played the fool" with my patients, and "regret it exceedingly."

Probably my friend would further say: "The fever has dried up the secretions of the digestive fluids; lacteal absorption is prevented by the disease of Peyer's patches, and the vitiated secretions, dead and dying tissues, food that cannot be digested, all forming a decomposing mass in which the typhoid bacillus, the pyro-genic bacteria, and a host of unknown micro-organisms carry on their work,

unchecked by the forces which in health are sufficient to prevent their functions.

When these known and host of unknown micro-organisms have entered the blood, no remedy can pursue them and destroy the life of the bacteria without first destroying the life of the patient. If this theory be true, then all patients who die must have their blood filled with hosts of unknown micro-organisms.

Doctors will always agree on known and established facts. They will disagree on unknown facts.

Some assert that all diseases result from living entities or micro-organisms. Others assert, with the same amount of proof, that all microbes and bacteria are the result of diseased tissue. My experience forces me to accept the latter theory.

ART. VII.—Medical Colleges.*

By B. J. BALDWIN, M. D., of Montgomery, Ala.,

PRESIDENT OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA, ETC.

The subject of the education of doctors is one of the important problems that this Association has to deal with. From economical and other reasons, most of the applicants in this State for the practice of medicine are graduates of Southern medical colleges. Now, on this subject of colleges, I am going to talk plainly.

It is to be regretted that the position of most of the Southern and Western medical schools is not at all creditable to the profession, or the cause of medical education. Their standard of graduation is low, the preliminary requirements amount to nothing, and the time for instruction is entirely too short.

The argument of the Southern and Western colleges is,

* Being an Extract from the Annual Address of the President, delivered during the session of the Medical Association of the State of Alabama during its session in Montgomery, April, 1892.

that they cannot afford to lengthen the time and require three courses of lectures, because they would lose their students. Better by far lose every student than to manufacture incompetent doctors, and turn them out to prey on the weak and innocent. If all the colleges would agree to demand a three years' course, however, they would lose none of their attendance.

All of the Eastern and a few of the Western colleges have lately entered into a compact to make the course three years and require preliminary examinations. Why cannot our Southern schools do likewise? I think it is the duty of this Association to reiterate every year its firm conviction in the necessity for higher medical education, and to exert its influence to persuade all Southern schools, at least, to adopt the three years course, with preliminary examinations.

The law of Minnesota requires that all applicants for license to practice medicine shall have attended three courses of lectures of at least six months each before they are even eligible for examination. This is a commendable move to elevate the doctor in the West and give the people better medical services. The reasons for higher medical education are too vast and potent to demand any explanation or defense in this day, and the time is coming, and that very soon, when the people will force these low standard schools to a higher plane, or reject the products of their teaching as unworthy of confidence and unfit to receive the sanction of license to practice. I here submit a table showing the number of graduates of the Northern, Southern and Western medical colleges who have been examined in Alabama since 1878:

Southern.	Applied.	Granted.	Rejected.
University of Nashville.....	14	13	1
Vanderbilt University.....	92	88	4
Meharry Medical College (Nashville)...	5	2	3
Memphis Hospital Medical College.....	10	8	2
University of Louisville.....	18	14	4
Kentucky School of Med. (Louisville)...	16	15	1
Louisville Medical College.....	26	20	6
Louisville Hospital Medical College.....	4	4	0
Central University (Nashville).....	1	0	1
Transylvania University (Lexington)...	6	5	1
Georgia Medical College (Augusta).....	8	6	2
Atlanta Medical College.....	42	28	14
Southern Medical College (Atlanta).....	20	17	3
Georgia Eclectic Coll. Reform (Atlanta)	10	6	4
Savannah Medical College.....	1	1	0
Alabama Medical College (Mobile).....	122	115	7
University of Louisiana—Tulane (N. O.)	25	25	0
Virginia Medical College (Richmond)...	7	7	0
University of Virginia (Charlottesville)	13	13	0
University of Maryland (Baltimore)....	10	9	1
Baltimore Medical College.....	1	0	1
Physicians and Surgeons, of Baltimore.	13	12	1
Washington University.....	1	1	0
Howard University (Washington).....	6	2	4
University of Tennessee (Nashville)....	30	25	5
South Carolina Med. Col. (Charleston)...	6	5	1
Totals.....	507	441	66

Western.	Applied.	Granted.	Rejected.
Missouri Medical College (St. Louis)....	2	2	0
St. Louis Medical College.....	3	3	0
St. Louis Medical College (Eclectic).....	1	1	0
University of Kansas City.....	1	1	0
Columbus Medical College (Ohio).....	3	2	1
Cincinnati Medical College.....	1	1	0
Cincinnati Medical College (Eclectic)...	2	0	2
Pulte Medical College (Cincinnati).....	4	4	0
Miami Medical College (Cincinnati).....	7	7	0
Rush Medical College (Chicago).....	4	3	1
Hahnemann Medical College (Chicago)	3	1	2
Detroit Medical College.....	1	0	1
University of Michigan (Ann Arbor)...	2	2	0
Hospital Medical College (Cleveland, O.)	1	1	0
Western Medical College.....	1	1	0
Totals.....	36	29	7

Northern.	Applied.	Granted.	Rejected.
University of Buffalo.....	1	1	0
Albany Medical College.....	1	1	0
Syracuse Medical College.....	1	0	1
Long Island Hospital (Brooklyn).....	1	1	0
Physicians and Surgeons of New York..	6	6	0
University of New York.....	13	13	0
Bellevue Hospital Med. Col. (New York)	12	12	0
Hahnemann Med. Col. (Pennsylvania)..	3	1	2
Jefferson Med. Col. (Philadelphia).....	18	15	3
University of Pennsylvania (Phila)....	10	10	0
University of Vermont.....	2	2	0
Harvard University.....	3	3	0
Hospital College of Boston.....	1	0	1
Boston University of Medicine.....	1	1	0
Charity Hospital College (New York)...	1	1	0
Totals	74	67	7

	Applied.	Granted.	Rejected.
Foreign.....	5	5	0
Non-Graduates.....	7	5	2
Unknown.....	18	12	6

RECAPITULATION:

Whole number applied.....	647
Whole number granted.....	559
Whole number rejected.....	88
Percentage of rejections	13.50
Percentage of rejections of graduates Western Medical Colleges,	19.40
Percentage of rejections of graduates Southern Medical Colleges,	13.01
Percentage of rejections of graduates Northern Medical Colleges,	9.45
Percentage of rejections of non-graduates.....	28.57
Percentage of rejections of graduates (College unknown).....	33.03
Percentage of rejections of foreign graduates.....	0.00

[*Note by Editor.*—We must be pardoned for adding an editorial note to the above pointed, “plain talk” by our distinguished friend, the ex-President of the Medical Association of the State of Alabama. We are in full sympathy with the intention of his line of remark—appealing for a higher grade of education for medical graduates from American medical colleges. But had he arranged his geography a little differently, so as to make the Potomac,

the Ohio, and the Mississippi rivers the boundary line of the Southern States, and included the whole of Louisiana and the State of Texas, he would have got different figures and more favorable arithmetical proportions, so far as concerns the medical colleges of the Southern States. This remark is applicable also to the results of examinations by the Medical Examining Board of Virginia, from the date of its organization, January 1st, 1885, to the present time. Thus considered, the records of examinations by the Alabama Boards (as given above) and the Virginia Board would present the following results:

SOUTHERN COLLEGE GRADUATES *before the Examining Boards of—*

Alabama.....	476 applied;	417 passed;	59 rejected, or 12.4+ %
Virginia	202 applied;	167 passed;	35 rejected, or 17.3+ %
Totals	678 applied;	584 passed;	94 rejected, or 13.7+ %

WESTERN COLLEGE GRADUATES *before Examining Boards of—*

Alabama.....	36 applied;	29 passed;	7 rejected, or 19.4 %
Virginia	16 applied;	13 passed;	3 rejected, or 18.2+ %
Totals	52 applied;	42 passed;	10 rejected, or 19.4+ %

NORTHERN COLLEGE GRADUATES *before Examining Boards of—*

Alabama.....	105 applied;	91 passed;	14 rejected, or 13.3 %
Virginia	294 applied;	191 passed;	103 rejected, or 35.3+ %
Totals	399 applied;	282 passed;	117 rejected, or 29.2+ %

Thus viewed geographically as to colleges, it appears that the Southern States' medical colleges are more exacting as to the grade of requirements for medical graduation than are those of either the West or North; whereas, the implication of the Address on which we base the above facts and figures is, that the Southern colleges are graduating candidates on a lower percentage than Northern colleges. Nevertheless, it is unquestionable that graduates of didactic institutions, however well they may answer examination questions, should not be satisfied with their attainments until they have availed themselves of ample opportunities for clinical instruction.]

Dr. S. King, of Little Rock, prescribed Ponca Compound for a very severe case of dysmenorrhœa, which had continued seven years. Five days before her time, he gave her twenty-six of the Ponca tablets, and then one every six hours as long as they lasted. She passed her period without any pain at all.

Clinical Reports.

Case IX.*—Injury of Eye-ball—Rupture of Sclera in Ciliary Region—Eye Saved—Case X.*—Rupture of Eye in Ciliary Region—Shrinking of Ball, with Supervention of Sympathetic Ophthalmia Years Afterward—Remarks on Sympathetic Ophthalmia, etc.—Selected Cases from the Clinic of the Richmond Eye, Ear, and Throat Infirmary.

By JOHN DUNN, M. D., of Richmond, Va.

CASE IX.—Injury to the Eye-ball—Rupture of Sclera in the Ciliary Region—Eye Saved.

Negro girl, age 23, two days before coming to the Clinic, was struck in the eye with a glass vase. Condition found to be as follows: Decrease in tension in the ball, showing that there had been considerable loss of vitreous. The ball showed a split from the centre of the cornea vertically upward, extending 3 mm. into the sclera. Into the slit in the sclera, which gaped about 1 mm., was a protrusion of a part of the ciliary body; the iris had been forced at the angle into the slit of the cornea; this slit in the cornea, except just at the periphery, was linear, and along this line the cornea was cloudy, otherwise the cornea showed no sign of irritation. The anterior chamber was shallow, and the pupil contracted to a pin point. There was some congestion in the neighborhood of the slit in the sclera; otherwise the pericorneal injection was not marked. The eye-ball was little sensitive to the touch, giving no such pain as is usual in cyclitis. There was no pus; no visible iritis.

If there had been caused by the blow a rupture of conjunctiva, it had healed, so that the whole scleral part of the wound was covered with conjunctiva. Because of the protrusion of the ciliary body into the scleral wound, and because of the fact that negroes are extremely uncertain in regard to their attendance upon a clinic, even in the most urgent cases, and, further, because of their generally unhygienic mode of living, the question of removal of the eye presented itself. However, as no infection of the wound had taken place up to this time, and as the wound showed

* The numbering of these Cases refers to the order in which they are being selected for report.

a great desire to heal, being already protected by the conjunctiva, it was thought best to watch it for a day or two.

Atropia was ordered, as were also cold applications. The atropia produced a complete dilatation of the pupil, and most probably had some effect, by contracting the iris at its base, in pulling thus this part of the iris in a measure out of the split in the cornea. Under this treatment, the irritation that was present about the ciliary staphyloma gradually subsided, and the wound in the sclera healed so perfectly as to force the prolapsed part of the ciliary body, which fortunately had been small, back into place. At the end of about three weeks every sign of inflammation had ceased, leaving as a visible reminder only an opaque linear scar, which extended through the entire thickness of the cornea from the centre vertically upward; iris adherent in upper part; a slight scar marks the rupture of the sclera. While, of course, the scar in the cornea interferes somewhat, the vision of this eye remains fairly good— $\frac{20}{40}$. No trouble could be made out in the fundus when the pupil had been sufficiently dilated to allow examination of it. The lens remained perfectly transparent.

It is not improbable in this case that the preservation of the eye was due to the rupture implicating but slightly the conjunctiva, there being no evidence of its rupture or of subconjunctival hæmorrhage two days after the injury. Had there been an extensive rupture of the conjunctiva, or had the rupture of the sclera been more extensive, a suture might have been passed through them so as to approximate the two lips of the wound.

Unfortunately, few cases of rupture of the sclera in the ciliary region terminate so happily—the involvement of the parts concerned being generally greater, and the introduction of the microbe element often complicates matters still further. The case, however, shows that traumatic rupture of the sclera in the ciliary region is not necessarily fatal to the preservation of the eye.

Will there be eventually a shrinking of the ball? Probably not, although such a thing is possible.

CASE X.—Rupture of the Eye in the Ciliary Region—Shrinking of the Ball, with Supervention of Sympathetic Ophthalmia Two and a Half Years after the Injury.

Jas. B., negro, age 64, was injured in the ciliary region,

O. D., with a large needle, such as is used in sewing carpets. The wound was followed by escape of vitreous, irido-cyclitis, atrophy of the ball. After the inflammation subsided, the negro felt no more pain in the eye up to the time of his presentation at the Clinic—more than two and a half years later. In December, 1891, the sight of O. S., which had been perfect up to this time, began to fail. On February 3rd, he came to the Clinic. No pain on pressure in O. D., which has atrophied to one-third its normal size. This ball shows a large triangular scar through the ciliary region in the inner half of eye. The negro says he has never been conscious of pain in this blind eye since the injury. [This statement is to be received *cum grano salis*, both on account of the nature of a negro's memory in regard to physical discomfort, and because of his at times wonderful endurance of lesions which in the whites would cause greatest agony.] There is no pain on pressure, no sense of pain or discomfort in O. S., the tension of which is probably $+2\text{ T}$; the cornea is so hazy as to shut out every trace of a red reflex, and this although the pupil is dilated three-fourths maximum and is immovable under light stimulus; the corneal haziness is densest through the lower half of the cornea; view of fundus impossible; there is no marked pericorneal injection; no photophobia; vision is practically reduced to the ability to distinguish light from darkness, and the perception of the outlines of objects between the eye and the source of light. The patient was led to the Clinic by his wife. All the history obtainable is that since some time in December his eyesight has failed him and he has never seen since.

After watching the case for two or three days, I removed the atrophied stump. The eye was removed under cocaine, the patient during the operation sitting upright in a chair, and leaving for home immediately afterwards.

One point was to be commented upon. The operation was almost bloodless—section of the conjunctiva being entirely so. It is not improbable that in the causes which prevented the determination of an excess of blood to the orbit, is to be sought partially the explanation of the absence of pain in the stump and in the eye with the "serous iritis."

Following the removal of O. D., the cornea of O. S. cleared slowly from above downward, until a dim red reflex could

be seen—no view of the fundus, however; the pupil gradually diminished in size, and when the cornea was cleared enough to see the pupillary margin, it was found to be surrounded by a slight deposit. The tension remained high. A drop of eserine readily reduced the pupil to a pin point size, but seemed to have the effect of increasing the amount of deposit along its free edge. Mercurial inunctions, hot applications, and atropine changed this condition of affairs very little. The corneal haze varied in density from day to day, showing that the process at work in the eye had been only temporarily, or, at most, only partially relieved by the removal of the stump of O. D. The tension of O. S. remained high. No pain at any time. Vision varied as the density of the corneal haze, but remained much better than it had been before the enucleation.

Finally, after six weeks' treatment, having failed to ameliorate matters, iridectomy was done in O. S. This operation produced but little reaction, although it considerably increased the amount of the deposit on the lens surface. Reduced tension to normal temporarily. The deposit on the lens surface increased slowly from day to day, so that April 12th, 1892, it was considerable in amount. No fundus visible. Cornea more hazy than ever. No pericorneal injection. Slight increase of tension. No pain on pressure upon the ball, although patient says he has sometimes pain in the ball at night. Hot applications, mercurial ointment, atropine have no effect. The process affecting the eye when first seen, continues its way slowly, but surely.

April 23rd.—Patient has suffered severe pain in eye for past three days. Hot applications increase the pain. To-day tension is decidedly +, but not painful on pressure when I saw him at 2 P. M., although he said it had been painful to the touch in the morning. Decided pericorneal injection, which extends a considerable distance from the cornea. Increase of deposit in the cornea, and in the anterior chamber on the lens over condition on the 12th of April. Atropine partially dilated the pupil, which was then kept fixed by the deposit.

May 2nd.—Negro has suffered severe pain in and about the eye for the past week. Cyclitis. Some clearing of the cornea. Slight deposit over the whole pupillary area. No cloudiness of the aqueous. Treatment apparently without avail.

May 25th.—Cyclitis has not yet subsided; has been so severe as to produce thinning of the sclera-corneal junction. All treatment useless.

Like all cases of sympathetic eye trouble, this case suggests the question as to the *mode of origin of the disease in the sympathizing eye*. Up to a certain point, the most satisfactory of the hypotheses upon this subject is the one that regards sympathetic ophthalmia as the expression of a vaso-motor neurosis. Unfortunately, when this point is reached, the key of analogy is wanting, and the door to the secret remains locked.

In the first place, we have the conditions necessary for the production of a neurosis. "The origin of a neurosis implies the existence of a pathologically conditioned region in which the exciting waves arise whose reflex response is the expression of the neurosis in question." (Woakes.)

In the second place, sympathetic ophthalmia does not follow immediately upon the receipt of the injury to the other eye. Its appearance varies, when it does appear, from a few weeks to an indefinite number of years.

Again, sympathetic ophthalmia develops, apparently, more easily in children than in older people; and it would appear that childhood is the age in which the violence of neuroses is relatively greatest.

And, again, neuroses select for their expression preferably those regions whose nerve supplies proceed from centres closely correlated with those to which the exciting waves from the pathologically conditioned area spread.

Through their nerve supply the two eyes are connected physiologically and anatomically, and there are no two areas of the body more adapted by nature for the expression of neuroses in one area dependent upon pathological changes in the other area than are the two eyes. In health, their accommodation, their movements, their perception of objects, their response to the stimulus of light, are all virtually one. The optic nerve from each eye meets the nerve from the other, and by giving and taking alike makes fast the band of union between the eyes. The lymph channels of the optic nerves make closer still the connection of the two eyes. Sharing thus alike in health, imagination, were the facts out of the question, could draw the

picture of the sympathy of one in disease with the other. So sensitive is the eye to reflex demands that it responds to them, not alone when these demands come from its fellow eye, but often when they are made from other regions.

As examples of sympathy expressed by the eye with pathological conditions not in the other eye, may be mentioned the following: Œdema of the lid or lids from nasal polypus, or from hypertrophic conditions of the turbinates; pain in the eye-ball from nasal stenosis; paresis of the ciliary muscle from turbinate hypertrophy; Lennox Browne's oft-quoted case of glaucoma from nasal polyp (a case, *en passant*, which, if more had been observed like it, would help far on toward the solution of the question of the nature of sympathetic ophthalmia.) For my part, I am inclined to think other causes than the nasal polyp had the major share in the production of the glaucomatous condition, however much the neurosis originating from the polypus may have had to do with preventing a cure so long as it remained in the nose.

Direct injury or irritation of the larger branches of the trigeminus may give rise to even more marked sympathetic trouble. Thus injury of the supra-orbital has been known to produce a hyperæmic condition of the conjunctiva, lachrymation, contraction of the pupil, diminution of the visual acuity, contraction of the field of vision, cloud before the eyes, sensitiveness to light; and this not alone on the side upon which the injury to the branch of the trigeminus existed, but in both eyes. In one case I have seen diplopia result, as I believed, from irritation of the supra-dental nerve.

Mauthner (*loc. cit.*) says: "Just in the same way as the obscurations of the field of vision, as well as the diminution of central vision with concentric limitation of the field of vision, do not depend upon diminished, but on increased irritability of the retina, so the sensitiveness to light, rapid weariness of the eye at work, photophobia, flashes of light and sparks before the eyes, are manifestations of irritation propagated from one optic nerve to another." Not necessarily

from one optic nerve to another—due to intra-ocular irritation—since, as said above, all of the symptoms, with the exception of “flashes of light and sparks before the eyes,” may result reflexly from injury to the supra-orbital nerve. (*Vid.* “Case of Injury to Supra-Orbital Nerve,” *N. Y. Med. Jour.*, May 30, 1891.) In this case of injury to the supra-orbital nerve all the symptoms of sympathetic irritation were present, although in a degree less severe than is sometimes the case in sympathetic irritation due to injury of the first eye.

While considering the extent to which reflex excitement may reach, whether it stops at irritation or may proceed to inflammation, the following case is instructive: Mr. A., chronic eczema of the face, chronic ulcer of the cornea. The skin supplied by the trigeminus is, then, diseased. Now, after the skin is apparently healthy, but before the nerve supply regains its normal tone, we can precipitate a fresh attack of eczema by irritation of corneal ulcer, as I have done with bichloride of mercury, with the actual cautery and with hydrogen peroxide. The resultant reflex is not merely erythema of the skin of the cheek and lids, but erythema, swelling of the lids *with elevated temperature of the part*, œdema of the skin, eczema of the cheek, which extended down to the collar-bone, *and the eczema of the weeping kind*. This case is interesting as showing *how reflex influences, which have to exhibit themselves in areas already diseased, may induce actual inflammation*. In this case it is true that the patient had had eczema of the face, and at the time these results were obtained there were excellent reasons for knowing that the eczema had not entirely disappeared; and, further, for believing that the eczema was the result of nerve irritation—perhaps of sensory nerve neuritis. But, although all this be true, the re-appearance of the eczema in an acute form every time that the corneal ulcer was irritated, and the fact that the severity of the eczematous outbreak was severe in proportion to the severity of the irritation applied to the cornea, proves that the fresh outbursts of eczema were reflex upon irritation of the cornea.

As further examples of reflexes, the result of irritation of the cornea, I may mention the nasal hydrorrhœa that often accompanies phlyctenes of the cornea in children, the hydrorrhœa showing itself in the side of the nose corresponding to the eye in which the phlyctene is present. It is more than probable that the phlyctene in phlyctenular ophthalmia is the result of infection from the decomposing nasal secretions, as almost without exception in children suffering from this disease there will be found diseased adenoids of the naso-pharynx. The clear, watery secretion that often pours from the nose, on one side of the phlyctene affect only one eye, in both sides if both, is the result not unlikely of reflex paresis of the blood-vessels supplying the nasal mucous membrane, although it may be the result, less likely, of the hypersecretion of tears which pass into the nose. Or, again, in a case of infected ulcer of the cornea, due to infection of the corneal wound following the operation for pterygium, I have seen disseminated acnoid spots appear in the skin of the cheek beneath the eye affected.

In looking for an explanation of the mechanism of reflex actions that result in irritation, and of the roads by which the nerve influences travel from the pathologically conditioned area to the area exhibiting the reflex irritation, we naturally seek the route followed by the sensory nerve supplying the area of origin of the reflex to either its nearest ganglion centre or to its centre in the brain or medulla or cord; in this centre, whichever one it be, there is, as it were, a turn-table, by which the sensory impulse leaves the centre along another route; and, we generally say, in these cases it chooses the route of the sympathetic nerves, and so reaches its destination, the reflexly irritated area.

While this is seemingly the route taken by reflexes that exhibit themselves as irritation, multitudes of unanswerable questions suggest themselves. One of the more prominent of these questions is: Why does not irritation of the same area always produce the same reflex? For example, sympathetic eye troubles show themselves as: Sympathetic irritation, including photophobia, photopsia, functional dis-

turbances of the retina; sympathetic keratitis (Warlomont); sympathetic intermittent keratitis (Rossander); sympathetic kerato-iritis (Vignaux *et als*); sympathetic scleritis (Rossander); iritis serosa sympathetica; iritis plastica sympathetica; irido-cyclitis sympathetica; retinitis sympathetica (Galezowski); sympathetic poliosis (Scheuhl). (Above cases are quoted from Mauthner's *Sympathetic Diseases of the Eye*.) Some of the above cited cases are, doubtless, not true cases of pure sympathetic inflammation, there having existed, I think probable, certain added conditions which predisposed the affected parts to develop, sympathetically, inflammatory state. From apparently the same nasal area in different persons the reflex neuroses present a far more varied picture.

The very fact that sympathetic eye troubles can assume different forms is an argument in favor of their reflex, and not direct, origin. In the case of sympathetic irritation, it would seem, from the analogies furnished by experiment, that the hyperæmic condition of the conjunctiva is the result of paresis of the sympathetic—*i. e.*, the vaso-motor fibres to the conjunctival blood-vessels—similar hyperæmic results being obtainable in the ear of a rabbit by section of the cervical sympathetic.

Overfilling of the vessels of the iris is followed by contraction of the pupil, a condition of affairs we have in the case above referred to of injury to the supra-orbital nerve; and it would be no awkward stretch of the imagination to find in concentric contraction of the field of vision, photophobia and diminution of visual acuity, the expression of a vaso-motor paresis of the vessels of the retina.

“The naso-ciliary nerve never enters the orbit through the sphenoidal fissure, as the third branch of the ophthalmic (sensitive) division of the trigeminus. As it crosses the optic nerve, the naso-ciliaris, having previously given off the long sensory root (*radix longa*) to the ciliary ganglion, sends off from one to three filaments, called the long ciliary veins, which run straightforward to the eye-ball. The ciliary ganglion, situated between the optic nerve and the external rectus muscle, receives motor fibres (*radix brevis*) from the

third cranial nerve and sympathetic fibres (radix sympathetica) from the cavernous plexus, which surrounds the internal carotid artery. The three roots just mentioned enter the posterior border of the ganglion, whilst the anterior border gives off the short ciliary nerves, which then pass forward to enter the eye. The long and short ciliary nerves split up into fifteen to twenty filaments before piercing the sclerotic around the periphery of the optic nerve, and dividing still further as they advance, run forward, between the choroid and sclera, to the ciliary muscle, in which they form a fine network, from which numerous fibres are distributed to the iris and cornea. The ciliary nerves, by reason of their triple composition, confer *sensibility* upon the individual parts of the eye, as well as *motility* upon the ciliary muscle, the muscles of the iris and those of the parietes of the vessels" (filaments vaso-motor from radix sympathetica).

Thus it happens that injury to the eye sends its sensory impulses first to the ciliary ganglion; here is transformed a part of these impulses into vaso-motor impulses, which go directly to the seat of injury, to resist as far as possible the results of the injury, or to furnish material for the restoration of the functions of the part, and results in vaso-motor constriction of the injury by only slightly irritant, or in vaso-motor dilatation (result of paresis) when the injury is more violent; and it seems highly probable that from the ganglionic centre vaso-motor impulses pass not only to the seat of injury, but in a certain measure to the whole area supplied by the vaso-motor efferent fibres from this ganglion. The remainder of the sensory impulses pass out to the higher ganglion (of Gasser), or to the brain centres, to the medulla, where a further transformation of sensory into vaso-motor impulse takes place. And I have no doubt, in the case of a child, who loses an eye through failure to remove the injured eye, that the complex of vaso-motor reflexes exhibiting themselves are at once most varied and interesting. One may not allow a child to lose an eye, however, that one may study exhibitions of reflex actions; and

our observation of these reflexes are thus necessarily limited and more or less disconnected.

The further question arises as to whether there must necessarily be pathological changes in the ciliary nerves as a *sine qua non* of sympathetic ophthalmia; and if so, whether these changes are the result of direct spread of the inflammation along the nerves from the diseased area, or whether they result from the severity of the "nerve-storms" that pass along them. Alt has searched for alterations in the ciliary nerves as the sesame to the understanding of the nature of sympathetic ophthalmia; but as a reward for his labors, he discovered no constant lesion, and, in the majority of the cases, no lesion at all, or none that might serve as an anchorage for hypothesis.

Again, after enucleation of the injured eye, when the enucleation has been performed at the right time, the rapid and complete disappearance of the symptoms of irritation proves that the irritation symptoms were due to perversion of function rather than to organic change.

Unfortunately, the failure of enucleation to remove the symptoms attendant upon irido-cyclitis, iritis plastica, or even iritis serosa in many cases, does not seemingly lend its evidence in the same direction. The removal of the atrophied ball in this case is followed by marked temporary improvement in the condition of the sympathizing eye. This improvement, however, is only temporary, as, after a few weeks, the iritis serosa becomes an irido-cyclitis, and the eye is lost.

The history of this case would seem to bear out Mauthner's credo in regard to treatment in presence of an iritis serosa sympathetica; that "enucleation is contra-indicated; and the enucleation, under these circumstances, of an eye which is not totally blind, is absolutely unjustifiable." In this case the eye enucleated had not only been blind for more than two years, but was atrophied, and somewhat painful. Mauthner's teaching on this point is, however, not everywhere accepted; Marchal has collected ninety cases where enucleation was done in the presence of one of the

so-called "benign" forms of sympathetic inflammation. Among these ninety cases there were only eleven where enucleation was followed by failure to relieve the condition in the sympathizing eye; and one has, perhaps, fair reasons for doubting whether there would have been seventy-nine eyes saved had the treatment been other than enucleation.

How are we to interpret this sequence of events—improvement in the sympathizing eye immediately after enucleation of the second eye, this improvement followed by an inflammation which ends in the destruction of the eye? In the first place, there is distinct improvement in the condition of the eye with the sympathetic iritis serosa for the days immediately following the removal of the atrophied stump. Such an improvement has been noted often enough, and Mauthner lays especial stress upon this point. The temporary improvement is certainly dependent upon the enucleation. What has the enucleation left in the place of a persistent source of "nerve-storms?" It has left a wounded area, the result of section of the optic nerve, ciliary nerves, blood vessels, tendons, and of all the tissues holding the eye in the socket; and it is during the time requisite for the healing of this wounded area and the establishment of fixed relation among the contents of the orbit in its changed condition that the temporary improvement is seen in the sympathizing eye. As soon as these fixed relations become established, the sympathetic trouble of the second eye appeared in an aggravated form.

It remains a question whether any treatment could have saved the second eye, although enucleation may have hastened a state of affairs which was certain to appear, or "may have been unable to cut short the irido-cyclitis which was already under way." (Hirschberg.)

Why was not the marked improvement in the second eye, following the enucleation, permanent? Seemingly, the removal of the source of the trouble should remove the effects. The fact that in a certain proportion of these cases of so-called "benign" sympathetic affections there is no return to the normal after the enucleation of the primarily

affected eye, seems to mean that changes have been brought about, in the sympathizing eye, which are no longer dependent for their continuance or aggravation upon the presence of the primarily injured eye. This is certainly the case in the so-called malignant forms of sympathetic ophthalmia. It must have been such a case as the one here reported, where, following enucleation, there appeared in the second eye temporary improvement that led the supporters of the reflex-neurotic origin of sympathetic ophthalmia to search for changes in the ciliary nerves to support their hypothesis.

Continued "*excessive* stimulation ultimately exhausts the nerve, and causes, at the same time, the phenomena of paralysis of the vascular wall;" and "continued excessive energy," reflex from the nerve waves originating in the ciliary region of the injured eye, is exactly what we have in the ciliary nerves of the secondarily affected eye. Nor does it seem unlikely that, in the changes, the result of vaso-motor paralysis in the ciliary body is to be sought the beginning of the story whose succeeding chapters are sympathetic irritation, "benign" inflammation, "malignant" inflammation."

The unanswerable question is, where do the "benign" forms end, and where the "malignant" begin? What factor added to the "benign" makes it "malignant?" Of ninety cases where the "benign" inflammation exists in the second eye, enucleation of the primarily affected eye is, in seventy-nine cases, followed, according to Marchal, by disappearance of the "benign" inflammatory symptoms; while in the remaining eleven the inflammation in the second eye assumes one of the "malignant" forms, and the eye is destroyed. While the negro, the subject of these remarks, was under treatment, the following case, which illustrates well the uncertainty of the sequence of events consequent upon injury to the ciliary region, came under my care:

Mr. G., 45, was struck, four years before, in the right eye by a piece of steel. Severe inflammation of the eye fol-

lowed the injury, as well as irritation of the second eye. For some reason, the injured eye, although blind as the result of the inflammation, and although it was the cause of irritation in the second eye, was not removed. During the following four years there was history of repeated inflammations in the injured eye, with more or less severe symptoms of sympathy in the fellow eye.

The condition of the right eye, when I saw him, was as follows: Scar, with slight contraction of ball in immediate neighborhood, in the ciliary region of the nasal side of the eye; obliteration of pupil by a membrane; eye extremely sensitive to touch; ball inflamed; severe peri-orbital neuralgia, as well as great pain in the eye; second eye sensitive to light, but giving no other evidences of irritation. The injured eye was removed, and just behind the scar, in the ciliary region, was found a piece of rusty steel about the size of a grain of rice. The lens was found to be cataractous, and there were various evidences of partial disorganization of ball.

Following the removal of the right eye there were slight evidences of irritation in the left eye for a day or two, but these soon disappeared, and Mr. G. had no further trouble with this eye.

Here, seemingly, all the conditions were favorable for the development of sympathetic ophthalmia, and yet four years had not been able to cause it. It is my belief that it would, however, sooner or later, have appeared.

In this connection, we must consider for a moment the "iritis serosa" as exhibited in this case. In the first place, although it had existed six weeks or more, it had, according to the negro, never caused the eye to pain; and the eye, when the negro came to the Clinic, was not in any way painful to the touch, nor was it sensitive to light, nor were there evidences of marked peri-corneal injection, nor was there any hypersecretion of tears. The tension of the ball was +. The cornea was in part hazy, from the deposit in the posterior layers, and there was evidently a slight deposit on the lens along the pupillary margin. No hypopyon; no visible disturbance of the aqueous. Iris was partly dilated.

This condition here described is, in general, the usual one

found in "iritis serosa sympathetica." Could this picture be produced as the result of continued vaso-motor disturbance, paresis of the small vessels in the ciliary body, *bringing about nutritive changes in the parts washed by the current from the "aqueous gland" through changes in the composition of the aqueous secretion?* It would seem that this might be probable, and I am inclined to think that due prominence has not been given to the part the "aqueous gland" plays in the production of sympathetic trouble in the second eye; nor is it unlikely that the key to the fuller understanding of the nature of sympathetic eye troubles will be found in the consideration of the facts that there is an "aqueous gland"; that, as a gland, it secretes a fluid whose composition must be within certain limits, and whose amount must be proportionate to the capacity of the excretory channels, that we may have a healthy eye; that both the nature and amount of the secretion from this aqueous gland are regulated by definite sets of nerves; that these nerves respond to reflex influences; that there is such a thing as reflex vaso-motor paresis, which, it is not unlikely, under certain circumstances may become vaso-motor paralysis; that, in all physiological ways, the brain centres for the two eyes are intimately connected, and that hence the second eye is the fit region for the nerve waves arising in the first eye to express themselves reflexly; that *vaso-motor disturbance can give rise to changes in the nature and amount of the secretion of the aqueous gland*; that if this vaso-motor disturbance be severe enough, or sufficiently prolonged, vaso-motor paresis or paralysis will ensue, and that this will be the cause of such changes in the composition of the aqueous humor as will result in nutritive disturbances of the endothelial lining of the anterior chamber; and that it is here we are to seek the meaning of sympathetic "benign" inflammation and thence to find the cause of the "malignant." (There are several interesting questions involved in the manner of production of these changes in the composition of the aqueous.)

According to Jesner and Grünhagen, stimulation of the vaso-dilator fibres of the trigeminus is followed by increased

flow of blood to the eye, "with consecutive excretion of the fibrin factors and increase in the amount of albumin of the aqueous humor." Nicati says there are "deux sortes d'humeur aqueuse: L'humeur aqueuse normale, qui existe habituellement dans la chambre antérieure et qui n'est pas coagulable; l'humeur aqueuse, qui se reproduit aussitôt après une ponction ou une opération et qui contient une si grande quantité de fibrine qu'elle se prend en masse, spontanément, comme de sérum sanguin." Nuel and Cornil, writing "of the endothelium of the anterior chamber, especially that of the cornea," says "le contact de l'eau pure est mortel pour l'endothélium, seule, la solution physiologique de chlorure de sodium est inoffensive. Il suffit cependant de descendre à la dilution de 4 pour cent. pour voir reparaître les effets délétères de l'eau. Les solutions de sels mercuriaux, employés souvent dans le but de désinfecter la chambre antérieure frappent de mort toute la couche endothéliale de la cornée, même à une dilution qui n'est plus microbicide."

These quotations bear out the facts that the composition of the aqueous humour varies and is under nerve regulation; and that the endothelial lining of the anterior chamber requires as the *sine qua non* of continuing in a healthy condition that the composition of the aqueous be within certain limits, and the further fact that solutions, which on other grosser parts of the body produce by contact no demonstrable lesion, can, when applied to the endothelium of the anterior chamber, cause deleterious results. In other words, it seems to me there are good reasons for considering the condition "*iritis serosa sympathetica*" to be the result of changes in the composition of the aqueous, which changes, in turn, were the result of continued excessive reflex nerve-storms which expended their force on the "aqueous gland."

Further questions involved in support of this point and in regard to the additional factor in the production of "malignant" forms of sympathetic ophthalmia, whose origin is substantially the same as that of the "benign" forms, will be considered later in connection with another case of sympathetic ophthalmia.

Report of a Case of Dermoid Cyst of the Ovary.

By J. THOMAS KELLEY, Jr., M. D., of Washington, D. C.

ASSISTANT RESIDENT PHYSICIAN IN COLUMBIA HOSPITAL, ETC.

Miss A., aged 50, white, sent by Dr. Frost, of Virginia, to the service of Dr. I. S. Stone, at Columbia Hospital, February 9, 1892. Menstruated first at 14 years; always regular; never painful; flow lasts three days; scant; menopause at 44 years, with no special symptoms. Had an attack of typhoid fever in October, 1891. January 4, 1892, while shaking a stove, the patient was taken suddenly with a violent pain in the lower abdomen. A physician was called, who found the abdomen so tender as to render an examination impossible. Morphia was given hypodermically until the pain was nearly controlled.

The following day the abdomen was found somewhat distended, the distension increasing more rapidly as time went on. Had several attacks of suppression of urine.

On admission to the hospital, she was rather anæmic, of yellowish complexion, and was suffering with violent pain in the abdomen and back. Temperature, 98.4° F.; pulse, 120. Examination showed emaciated condition of body, heart very rapid and weak, lungs in good condition; abdomen exceedingly tender, dull on percussion over the left side from the pubis to an inch above the umbilicus and three inches to right of median line, both flanks and lumbar region resonant, fluctuation not distinct. Vagina small, cervix small and hard, os small, uterus pushed to right by a tumor which extends down in the pelvis on the left; fluctuation through the vagina more apparent. Abdominal section for the removal of the tumor was advised.

Urinary analysis: *February 9.*—Yellow color; sp. gr. 1020; reaction acid; no albumen; some mucous sediment.

February 14.—A large amount of albumen present. Symptoms of acute nephritis setting in, the operation was postponed and the patient put upon treatment for this trouble.

February 20.—The albumen having nearly disappeared, and the nephritic symptom ameliorated, an examination was made under chloroform, with the view of arriving at a more definite knowledge of the nature of the tumor, and also to see how well the patient would stand the anæsthetic. The examination showed practically the same as the former, except the tumor seemed somewhat smaller. Good recovery

from the chloroform. The temperature continued downwards to normal, and the albumen disappeared entirely from the urine by February 25.

Operation, February 27.—Dr. Spieden and Dr. Frost, of Virginia, present with others. Incision in the median line four inches long through thin abdominal walls, coming directly down on omentum so adherent as to make it almost unrecognizable. After peeling this up for a distance, the wall of the tumor was come upon, also adherent to the omentum; indeed, so dense were the adhesions, that it was difficult to tell the omentum from wall of the tumor. Just here the cyst ruptured, and the most horrible smelling, oily fluid, filled with large flakes of a cheesy looking substance, poured out. So offensive was the odor that some of the visitors had to retire. The ruptured part was caught with clamp forceps and the cyst enucleated entire.

The posterior part of the tumor was found lying in a coil of intestines, supported in the center by the mesentery, and adherent to both all over the entire surface. The pedicle was twisted. The cyst was tied off and the stump cauterized with "Paquelin's cautery." The abdominal cavity was flushed out with several gallons of distilled water at a temperature of 110° F., a glass drainage tube inserted, the abdominal walls united with silk worm gut sutures, and the wound dressed with antiseptic dressings.

The tumor removed held about a gallon of fluid, the wall was very much necrosed and filled with pus. The cavity contained a yellowish, oily looking fluid, filled with hard flakes and long light colored hair.

The microscope showed this fluid to consist of oil globules, broken down red blood corpuscles, a large number of leucocytes, and some epithelium.

Patient reacted well. Temperature chart: before the operation the temperature ranged between 98° and 99° F.; pulse between 108 and 120, except during the attack of nephritis, when the temperature reached 102.4° F., and the pulse 140, gradually declining; till at the end of the week the temperature was 99.4° at night and 98.4° in the morning, pulse 108.

The evening of the day following the operation the temperature was 97.8° F., pulse 120. The temperature continued below normal during the first week, and at 5 P. M. March 2nd, four days after the operation, was as low as 96.2°, pulse 117. Under the administration of whisky and digitalis her condition improved, but the temperature always

had a tendency to be subnormal, and again, on March 17th, nineteen days after operation, fell to 96° F. Patient had a slight movement of the bowels and passed a great quantity of gas at 10 A. M., the day following the operation. The drainage tube was removed on the second day, the fluid drawn never having been offensive.

The integument about the site of the drainage tube began to slough about the seventh day. The stitch holes becoming infected, the whole tract of the wound suppurated, afterwards healing by granulation.

March 9th.—Albumen appeared in the urine in large amount, the patient again suffering with nephritis, which continued till March 26th, when the albumen entirely disappeared.

The convalescence was very slow. In the first place, the patient was very weak from the absorption of pus, and from the repeated attacks of peritonitis, nephritis, and of cystitis, which followed the disease of the kidney after the operation. Then the pouring out of such a large quantity of vile pus into the abdominal cavity made it impossible to wash out every particle, though such a large quantity of water was used. This weak and generally infected condition of the system, and the presence of pus over everything during the operation, caused the wound to suppurate, thereby draining the already wasted strength to its utmost capacity.

When she left the hospital, April 12, the wound was entirely healed, the cystitis was giving her no more trouble, and the symptoms and signs of nephritis had entirely disappeared, though she had not yet regained her accustomed strength. Report a few days since says she enjoys good health.

The conclusions and points of interest in this case are many and important. During the attack of typhoid fever, in October preceding, the abdomen was palpated frequently by her attending physicians and no tumor detected.

The pain at the beginning of the attack was caused probably by the twisting of the pedicle, then by obstructing the return flow of blood, causing distension of the tumor.

The necrobiosis of the tumor and contents was also caused by the twisting of the pedicle, interfering with the blood supply.

The temperature before the operation, except during an attack of nephritis, was about normal, showing that the temperature cannot be relied upon to indicate the absorption of pus.

The analysis of one specimen of urine ought not to satisfy a physician as to the condition of his patient's kidneys. The first examination here showed a comparatively healthy urine. The second found it loaded with albumen, and had it not been for this examination, the patient would have been operated upon in an attack of acute nephritis, with of necessity a fatal result, the symptoms being disguised by those seemingly arising from the tumor "*per se*," which would indicate an immediate operation to save the patient's life.

I need say nothing of the advisability of operating as early as possible in these cases. If this woman had been operated on when her physicians discovered the tumor and urged her to come to the hospital, she would have saved herself a very tardy recovery and a very narrow chance for life.

A woman may carry a dermoid cyst of the ovary all her life, and unless some accident occur, as the twisting of the pedicle in this case, may suffer no inconvenience—nay, may be ignorant of her possession.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

Correspondence.

Prescription Writing—Responsibility of Physicians and Druggists.

Mr. Editor—Very lately an accident occurred in Baltimore, by which a child lost its life because a druggist put laudanum in a prescription when the physician intended that paregoric should be used. The prescription called for peppermint water, simple syrup and paregoric, and for the latter the doctor wrote "Tinct. Opii c." (small c.) That the druggist was criminally careless there is no question, but I hold that the doctor was negligent in two ways at least; first, in not writing his prescription more distinctly, particularly when as delicate a thing as the life of an infant fourteen days old was at stake; and, second, in not stating on his prescription *that it was for an infant*. If the doctor had written his prescription *properly*, and stated on it that it was *for an infant* "fourteen days old," the accident would never have occurred, unless the druggist was *criminally* careless and densely ignorant into the bargain.

We learn from the newspaper account of this "terrible mistake" that the druggist was "arrested" and "put in jail," as he should have been; but for the doctor the jury only "*recommend that physicians at large use more care in the use of abbreviations in writing prescriptions.*" Now, I ask, in all candor, if it is entirely fair that *all the blame* should attach to the druggist when some of it certainly should be at the door of the doctor for not writing his prescription correctly, and for not saying the medicine was for a very young infant?

The late Dr. W. O. Owen, of Lynchburg, Va. (who, by the way, wrote the best prescriptions I have ever seen in an experience of thirty-five years), never abbreviated at all, but always wrote out everything in a plain, bold hand in Latin, and never failed to write on the prescription *full directions*, and *who it was for*, and if for a *young infant* or *small child* called particular attention to the fact. Such an

accident as is referred to never occurred with him, and it would be impossible, with any druggist who knew his business, or who did not carelessly neglect it. It is fair to infer that if this fourteen day old infant had been Dr. Owens' patient, or if this Baltimore doctor had written his prescription as Dr. Owens always did, even with the druggist who dispensed this prescription wrong, the mistake would not have occurred. But still, according to the *jury*, the blame is all on the druggist.

I have been a physician and am now a druggist, and I believe, looking at this case fairly, with partiality for neither, that, whilst the druggist is very much to blame, the doctor is certain not blameless. I would like to have your editorial opinion of it.

I trust you will excuse me if I embrace this opportunity to emphasize the importance of physicians always stating on their prescriptions *who they are for* (unless, of course, there is good reason for not doing so), and particularly always, if for an *infant* or *small child*, to say so. The importance of this is so axiomatic, it seems a work of supererogation to attempt an elucidation of the point. If a prescription is presented to a druggist to be prepared, in which the dose of laudanum is twenty drops, to be repeated in two hours, if he sees by the prescription that it is for an adult, without any hesitation he goes ahead and puts it up. But suppose the doctor says "for an *infant fourteen days old*," the druggist would at once know that the doctor did not intend to give a fourteen day old infant twenty drops of laudanum every two hours. If the doctor simply writes his prescription and does not say who it is for, as alas! so many do, and as very likely this Baltimore doctor did, any druggist would prepare it under the impression that it was for an adult, when really it is for an infant, and the doctor intended to write for paregoric, but inadvertently omitted the Camph., or C. I know I have stated a supposititious case, but all druggists have exactly similar experiences.

I might possibly, with propriety, as the Baltimore jury does, urge doctors to "avoid the use of abbreviations" in

writing prescriptions, but I believe it is very much more important to urge them to say *who they are for*, as intelligent druggists can nearly always tell what they mean, no matter what they write. But it often happens that it is impossible for a druggist to know whether a prescription is intended for an adult or child, and sometimes may put up a dose which would be all right for a grown person, but which would be fatally wrong for a *very young infant*, such as the Baltimore one was.

[*Note by Editor.*—Our correspondent, who has held the highest positions of honor in his State Pharmaceutical Association, has stated our opinion so forcibly, with reference especially to the miserable system of abbreviations, so common in prescription writing, that no word from us could more forcibly impress the importance of adopting a more intelligible custom. And he is undoubtedly right also in insisting that the doctor should state the fact that the prescription is for a baby when such is the case.]

Professional Notes in Philadelphia.

By J. McFADDEN GASTON, M. D., of Atlanta, Ga.

Mr. Editor,—Having attended the recent meeting of the American Medical Association in Detroit, and received much instruction from the proceedings, especially of the Section on Surgery and Anatomy, with which I was identified, my thirst for surgical knowledge led me to make a stay of two weeks in the city of Philadelphia.

Many years having elapsed since I commenced the study of medicine and surgery in the University of Pennsylvania, the old structures have disappeared, and new ones, with all the advantages of progressive science, have been constructed in a remote part of the city, near the site of the time-honored Blockley Hospital.

The Jefferson College is soon also to be removed to a more eligible location on Bond street, where it will be remodeled to meet the advanced ideas of the times.

The Medico-Chirurgical College and Hospital has more

recently claimed a place in public confidence, and give earnest of favorable recognition in sustaining a high standard of medical education.

A Woman's College, having taken the lead here some years ago, has continued its work with the addition of a well arranged hospital; and the showing made in the Surgical Department reflects much credit upon the female operators connected with this institution.

The Polyclinic is the outgrowth of the demand for post-graduate instruction in different sections of this country, and this institution, with its hospital, meets all the requirements. The Hospital accommodations, outside of those referred to, commenced long, long ago with the old Pennsylvania Hospital; which has been preserved throughout all these years without any very material changes, showing the wisdom of its founders in the proper adaptation of its wards to the care of the sick and wounded. An innovation is now being carried out by the construction of a large building for the official staff and nurses of the hospital. This outlay would have, perhaps, served a better purpose in erecting an edifice with the latter day improvements for patients.

There is a most interesting feature in the line of hospitals presented by the Children's Hospital of this city, and you can understand what a relief it must be to poor mothers who have to drudge for their daily bread, to know that their sick children are provided with all the comforts which the well-to-do class could confer upon them at home, but which they have not the means to give them.

As the counterpart to this, maternity hospitals are provided for lying-in women, and among them the Preston Retreat is the most complete in all its arrangements that could be desired for the delivery and subsequent treatment of those who cannot be cared for in their own humble abodes.

The public charities, established by the different religious denominations, are very important provisions for the indigent sick and injured people who are brought into their

hospitals for treatment. While they are maintained chiefly, if not entirely, by the sect whose name they bear, no limitation of religious faith is placed upon the patients, and many accidents of emergency are received in them.

It affords me much gratification to record my observation of the thoroughness of the outfit for their labor of love in these various hospitals—that of the Catholics, St. Joseph's Hospital, the Presbyterian Hospital, the Episcopal Hospital, the Methodist Hospital, and the German Hospital, each being elegant establishments.

Passing from the general to the special phases of the management of diseases and injuries, it would fall short of what is warranted by the facts not to mention my obligations to the members of the profession for numerous opportunities to witness many unique and interesting surgical operations performed during my stay in this city. From the variety of the cases presented during these two weeks, I must consider that the former prestige of Philadelphia as a great centre of medical and surgical instruction has been fully regained, and that every facility which can be desired may be enjoyed by the student or the practitioner who is seeking the highest attainments in medicine and surgery.

To present some idea of the work in surgery going on here even in summer, I may mention cases of fracture of the leg and thigh under the care of Dr. J. H. Packard, and a re-section of the knee joint by Dr. John Ashhurst, at the Pennsylvania Hospital; operation for hypospadias and internal urethrotomy, by Dr. Ernest Laplear, at the Medico-Chirurgical Hospital; removal of the spinous processes and external arches of the dorsal vertebra, styled laminotomy, by Dr. J. B. Roberts, at the Polyclinic, and extraction of cataract, by Dr. Jackson, at the same place; supra-pubic cystotomy, by Dr. W. W. Keen, at Jefferson College; laparotomy for appendicitis, by Dr. J. B. Drew, at the Penitentiary; exploration and drainage of abdominal fistula, by Dr. Clem Marshall, at Blockley Hospital; ovariectomy at his private hospital, by Dr. E. E. Montgomery, and two laparotomies for pus tubules by the same operator at St. Joseph's

Hospital; an abdominal hysterectomy, amputation of cervix, and four abdominal sections, by Dr. Jos. Price, and two restorations of perineum, by Dr. M. Price, at their private hospital; a double amputation at the ankle and joint of election, by Dr. Wharton, at Presbyterian Hospital.

In the rounds of the hospitals of course many other cases of great interest were noted, and especially I may refer to the treatment of a case of sunstroke brought into the German Hospital while I was there. It was treated by stripping the patient and applying ice to his body from head to foot, while brisk frictions were used, and a hose with cold water was turned loose upon his head and chest. His temperature was 107° Fahr. when he entered, and it was reduced notably while I remained, and the Superintendent expected complete relief, though the man was still in a comatose state. In this Institution, the water baths are employed in cases of typhoid fever with marked good results, and the temperature is regulated according to the effect upon the patient from hour to hour.

In one of the other hospitals a case of gunshot wound of the chest was under treatment, by compression of the thorax from adhesive strip, with a tube introduced into the cavity through the external wound, which the interne, at my suggestion, concluded to remove, and close up the opening.

Unwittingly, in still another Institution, the diagnosis of a tumor of the neck was changed, by lifting the tumor up from the carotid artery and demonstrating that there was no longer any pulsation in the mass, which had been supposed to be an aneurism.

Space will not permit even a passing notice of many highly instructive surgical results which came under my observation in the hospitals and private practice of surgeons. But the practical importance of a Porro operation in private quarters by Dr. M. Price, done for an immense uterine fibroid, complicated with a three months' pregnancy, calls for some details. The patient has been doing

well, and the depression left after the separation of the serre-nœud fast filling up by granulation. After examining the immense tumor with the foetus imbedded in it, I was strongly impressed with the resources of surgery in this class of cases, and obtained a photograph of this very interesting specimen.

While acknowledging my indebtedness to colleagues for the benefits received in examining their cases and witnessing their surgical proficiency, I must also acknowledge my obligations to others for their courtesies and kind attentions. Among these, stand prominently Dr. Gould, of the *News*, Dr. Doland, of the *International Clinics* and *International Magazine*, and in the absence of Dr. Sajous, Miss McArthur, of the *Annual of Medical Sciences*, of which she is the business manager.

A pleasant visit to the country residence of Dr. Packard, and a night of sweet repose at the home of Dr. Ashhurst, removed from the heated air of the city, are among the pleasant reminiscences of my brief sojourn in Philadelphia. In keeping with these outside recreations, the most refreshing enjoyment of a night at Preston Retreat, with Dr. Joseph Price, caused me to realize that country air could be enjoyed in the city by the inmates of that noble charity under his direction.

While the hospitality of other colleagues were extended to me most generously, I should not fail to recognize my special obligations to Drs. and Mrs. J. H. Munn and Drs. and Mrs. Edward Martin for invitations in advance to make my home with them while in the city. My expectations of being occupied, so as to make my hours very irregular, constrained me to decline them and other kind invitations of a like nature from my friends in Philadelphia.

J. McFADDEN GASTON, M. D.

(*Philadelphia, Pa.*), June 25, 1892.

Mr. Editor,—I have become greatly interested in reading an article from your journal, by Dr. S. W. Budd, entitled, "Diagnosis of Pregnancy by the Changes of the Urinary Phosphates." This article seems to be a confirmatory one of an article by Dr. Wm. B. Gray, which previously appeared in the *Virginia Medical Monthly*. As the article in question seems misleading, or not explicit enough, I write for information. He says:

"What most concerns the busy practitioner is the microscopic appearance of these crystals. * * * One should be thoroughly familiar with the normal crystals before attempting to recognize any departure therefrom.

"*The normal triple phosphate* is precipitated in those beautiful feathery crystals, sometimes a single leaflet, or in stellate form; but, however seen, each feather is perfect."

Now, as Roberts says, and as has been my experience, *the normal triple phosphate* is deposited in another form than the feathery crystal, or quoting Roberts, "The ordinary form of the crystal is a triangular prism with bevelled ends." While Beale says, "When triple phosphate is *precipitated* by the addition of *liquor ammoniæ* to urine, it occurs as beautiful feathery crystals." While I have seen these feathery crystals, due to ammoniacal changes in otherwise normal urine, they are, in my opinion, one of the rarer forms.

As the early microscopic diagnosis of pregnancy is of great interest, I would ask if Dr. Budd would have us understand, that as a condition of pregnancy we get this feathery crystal as the typical triple phosphate? Are we led to believe we get them as a primary deposit, or are we to await *these* deposits of ammoniaco-magnesian phosphates through decomposition, or are we expected, for purposes of experimentation and examination, to precipitate them as suggested by Beale?

Very truly yours,

W. C. CROMBIE. M. D.

1405 Stout St., Denver, Colo., May 25th, 1892.

Proceedings of Societies, Boards, etc.

AMERICAN MEDICAL ASSOCIATION.

The session held in Detroit June 7-10, inclusive, marks a period of advance in the organization. It was well attended—more than 1,000 members from all sections of the United States being registered. Our limited space does not allow of more than a running statement of some important parts of the proceedings.

The Committee of Arrangements, under the chairmanship of Dr. H. O. Walker, made ample provisions for the general as well as section meetings. The President, Dr. H. O. Marcy, of Boston, presided with the grace of ease that cannot be excelled. Several times during the session, one of less tact and familiarity with law than himself would have found himself in the utmost confusion; but he was ever equal to the emergencies, and ruled on points of order in a manner that would have done credit to a teacher of parliamentary usage. His address was on "Evolution of Medicine." [See it in full in *Jour. Amer. Med. Assn.*, June 11.]

An important amendment to the Constitution of the Association was adopted, which provides that each Section of the Association shall elect an Executive Committee of three members, which Committee shall hereafter give special attention to the interests of its own Section. The several Executive Committees so formed shall constitute the General Business Committee of the Association, to which all matters of business, not provided for by other Committees, etc., shall be referred. It shall hold daily meetings during the sessions of the Association, and to it shall be referred without debate all matters of business not provided for by the Committee of Arrangements, the Board of Trustees, the Judicial Council, the Committee on American Medical Necrology, and Special Committees. This Business Committee is to attend to the interests of the Association, promote the welfare of the various Sections, and report upon all matters of business referred to it by the Association at the earliest possible moment, when the Association may adopt or reject the report, as it may deem best. This Committee has nothing to do with the Committee on Nominations of Officers, etc., as at present constituted.

During the *Second Day*, the *Report of the Judicial Council*

was presented. It was taken up entirely, with a statement as to the relationship of Dr. W. W. Potter, of Buffalo, N. Y., to the Association. It appears that he has been a Permanent Member of the Association for fifteen years consecutively, long prior to the action of the Medical Society of the State of New York, which, three or four years ago, adopted a new Code, which permits consultations with "irregulars." Such action of the Medical *Society* of the State of New York, of course, threw it out of representative relationship in the American Medical Association; whereupon a number of members of the New York Society withdrew from the State Society and organized the New York State Medical *Association*, which Association recognizes the Code of Ethics as its law, and is in affiliation by delegates with the American Medical Association. Thus there are two State Medical organizations in New York. The *Society* is the one recognized by the laws of the State of New York, and hence it is this organization that nominates the "*Regular*" Members of the Board of Medical Examiners of the State of New York. Of this Board, Dr. Potter is a member. A year or two ago he was President of the New York *Society*. And yet, only two years ago, being a "*Permanent Member*" of the American Medical Association, he was the chosen Chairman of the Section on Obstetrics and Gynæcology of the American Association, and last year he was elected by the Association itself as one of its Board of Trustees, although his membership of the New York *Society* has all along been well known, for he has been prominent in the perfection of the "new move" in the old Society. Up to the time of his election as one of the Trustees of the Association, not a word had been officially suggested looking to charges against him as a member of the Association. But this election as a member of the Board of Trustees was the occasion of charges being preferred against him by a member of the Association residing in another State. But the *written* charges, as the law of the Association requires to be presented, were not presented to the Judicial Council until two weeks after adjournment of the National Association last year. Hence no action could be taken by the Council until the meeting in Detroit. The Council report (by a vote of seven to three) decided against the legality of membership of Dr. Potter as a member of the Board of Trustees, as he was not a member in good professional standing of the American Medical Association. This decision virtually expelled Dr. Potter from membership in the National Asso-

ciation, and left a vacancy in the roll of members of the Board of Trustees, etc.

This action virtually nullified all claims of membership in the Association of a large number of the most influential and valuable members of the profession in New York State who belong to the Medical Society of the State of New York.

Dr. Dudley Reynolds, of Louisville, moved that the report be laid on the table.

Dr. N. S. Davis, of Chicago, called attention to the law of the Association which makes the report of the Judicial Council final, and hence could not be debated nor laid on the table.

Dr. Reynolds then moved that the case of Dr. Potter be referred back to the Judicial Council, with the request that the causes for its action in this matter be specified. Ruled out of order.

Dr. Reynolds appealed from the ruling of the Chair, but the decision of the Chair was sustained.

Dr. Gihon, of U. S. Navy, then rose to a question of privilege to say that the status of Permanent Members, who had been registered year after year and against whom no charges had been preferred during that period, as in the case of Dr. Potter, could not be legitimately acted upon by the Council. He cited, as a precedent for this statement, the case of the members of the Association representing the U. S. Navy, who were refused recognition by the Council at the New York meeting in 1880; but Dr. S. D. Gross objected. The Association then unanimously sustained the objection, and the members of the Navy were received.

Dr. VanderVeer, of Albany, N. Y., asked as to the present status in the Association of members of the Medical Society of the State of New York, who were also permanent members of the Association. The action in reference to Dr. Potter had made their standing indefinite, and he desired to know whether their membership, which in some cases had extended over many years, was now to be considered invalidated. He expressed the belief that but for the action of the Council in the case of Dr. Potter, the differences between the Association and the New York State Society would have been adjusted in the course of the coming year.

Dr. Davis repeated the statement that all such matters were adjudicable by the Judicial Council alone, and without debate. If the by-laws were wrong they should be

changed, but as they stood at present, the matter was not under discussion.

Dr. C. A. L. Reed, of Cincinnati, moved that the inquiry of Dr. VanderVeer be referred to a committee, to be appointed by the Chair, to report, if possible, to the present meeting.

Dr. Hemenway, of Illinois, moved as a substitute, that the matter be referred to the Judicial Council, to be reported on to-morrow.

Dr. Reynolds moved as a substitute, that the Judicial Council decide whether permanent members were eligible to office, and whether the accepted registration of such members, year after year, should not be taken as evidence of their rights and privileges as members of the Association.

Dr. King, of Missouri, proposed as a substitute, that a committee of five be appointed by the Association to confer with five members of the Medical Society of the State of New York, to discuss the question proposed by Dr. VanderVeer, and report upon that and all kindred issues at the next Annual Meeting of the Association.

Dr. Davis proposed an amendment that five members of the New York State Medical Association be added to this Committee of Conference.

Dr. King replied that he thought no assistance from the New York State Medical Association was needed in the matter, there being no question concerning its status in the Association.

Dr. Hemenway objected to Dr. King's substitute, believing that it did not cover the original motion. The substitute was accepted in lieu of the original motion.

Dr. Gihon moved as an amendment to the substitute, that those members of the Medical Society of the State of New York who had registered should be entitled to all the privileges in the Association which they had heretofore enjoyed pending the decision of the question at issue. This proposal met with the almost unanimous approval of the meeting.

Dr. Truax, of New York State, believed that the New State Medical Association should have a voice in the settlement of this question, and that five of its members should be added to the proposed committee. The previous question was then called for, and was put and carried. Dr. King accepted the amendments proposed by Dr. Gihon and Dr. Truax.

The President appointed the following as the committee to confer with the committee from the Medical Society of the State of New York concerning the relation of its members to the American Medical Association: Drs. N. S. Davis, of Illinois; J. H. Rauch, of Illinois; W. T. Briggs, of Tennessee; D. S. Reynolds, of Kentucky; and W. P. King, of Missouri.

Until the report of the result of the consultation of these three different committees is formulated, the Permanent Members of the American Medical Association, who are also members of the Medical Society of the State of New York, remain members in good standing in the Association.

We have dwelt so fully on this detail of facts because of their great importance to the future of the Association. It was very evident, throughout the session, that a very large number of the Association, if not a goodly majority, are in favor of some changes in the written Code looking to a much more liberal interpretation of specific laws than now obtains in some sections of the country. So that the next session of the American Medical Association will be one of vital importance to the profession of the United States, especially if the Committee appointed by resolution for the purpose of revising the Code of Ethics will be ready with their report.

The President appointed the following to compose this Committee: Drs. H. D. Holton, of Vermont; H. D. Didama, of New York; Dudley S. Reynolds, of Kentucky; D. A. Nelson, of Tennessee, and Benjamin Lee, of Pennsylvania.

To quote the language of the *Weekly Medical Review*, "That this revision is imperative, no one will deny; yet it should not be too radical, lest many interests be antagonized which are too valuable to be alienated." In order that such revision should be the more perfect, and most satisfactorily represent the voice of the educated American profession, it occurs to us that the Committee on Revision of the Code should have been composed of at least one representative member of each State Medical Society which is in affiliation with the American Medical Association.

The Committee on the Pan-American Medical Congress, through its Chairman, Dr. C. A. L. Reed, of Cincinnati, Ohio, reported progress and an encouraging outlook for a very representative session in Washington, D. C., September 5th, 6th, 7th, and 8th, 1893.

The resolutions from the Medical Society of Pennsylvania, denouncing the too common custom of physicians

giving certificates as to the value of patent and proprietary medicines, deploring their endorsement in reputable medical journals, and especially condemning the managers of the *Journal of the American Medical Association* for inserting such advertisements in its pages, were adopted by the Association. A further resolution was adopted, directing the Trustees of the *Journal* to prohibit hereafter the publication of all commendatory mention or advertisement of secret preparations, etc.

The *Journal* Trustees reported a balance on hand of about \$1,800 after all outstanding indebtedness has been paid. The Board proposes hereafter to cease paying commissions on subscriptions, and to own all the type and machinery with which to publish the *Journal*.

Dr. A. L. Gihon, for the Committee on the Rush Monument Fund, reported that nearly \$3,000 had been collected with which to erect a monument in Washington, D. C., to Dr. Benjamin Rush.

The Librarian, Dr. George W. Webster, of Chicago, reported that the Newberry Library, of Chicago, offered to hold in trust all the books of the Association, etc. On motion, the offer was accepted.

On presentation by Dr. Dudley S. Reynolds, of Louisville, Ky., a resolution was adopted endorsing the action of certain colleges of the United States in raising the standard of medical education, etc.

Dr. J. M. Toner, of Washington, D. C., of the Committee on the subject, recommended that this Association hold its session of 1896 in Washington, May 14th of that year, to commemorate the centennial of Jenner's conclusive experiment as to the protective value of vaccination. Adopted.

On request of the Committee on Incorporation of the Association, further time was granted.

The Committee to consider the resolutions of the West Virginia State Medical Society concerning railway and contract surgeons reported that there are about 6,000 railway surgeons in the country, of which 1200 are members of the Association of Railway Surgeons. Railway surgeons often take charge of cases regardless of the rights of the physician first called, or of the family attendant. True, the patient, if conscious, had the right to choose his own attendant, but the railway company said to him, "If you do not take our surgeon you must pay the bills." The railway company has no right to force their surgeon on the patient, nor has the patient the right to force his surgeon on the railway com-

pany. Many railway surgeons work for inadequate pay. The Committee considered the evil too strong to attack without vigorous measures, and recommended that the Association discourage it and endeavor to prevent it from growing worse. The report was adopted.

Dr. C. A. L. Reed, of Cincinnati, moved to amend the Constitution so as to admit to membership physicians of Canada and the British North American provinces. The resolution lies over for a year.

A motion that after July 1, 1897, no one shall be admitted to membership in the Association unless he had studied medicine for four years, was laid over for a year.

The following officers were elected for the ensuing term : *President*, Dr. Hunter McGuire, of Richmond, Va.; *Vice-Presidents*, Drs. H. O. Walker, of Detroit, Mich.; Hawkins Brown, of Hustonville, Ky., Henry Jones, of Watertown, Conn., and Jesse Haines, of Sacramento, Cal. *Secretary*, Dr. William B. Atkinson, of Philadelphia, Pa. *Treasurer*, Dr. Richard J. Dunglison, of Philadelphia, Pa. *To deliver Address, 1893, in Medicine*, Dr. H. A. Hare, of Philadelphia; *in Surgery*, Dr. H. H. Mudd, of St. Louis; *in State Medicine*, Dr. Walter Wyman, of Washington, D. C.

Place, etc., of meeting, 1893, Milwaukee, Wis., first Tuesday in June. Dr. Hugh O. E. Wingate, Chairman of Local Committee on Arrangements.

Besides the Addresses delivered during the session, the total number of scientific papers presented before the several Sections was about 330—thus attesting the interest taken in scientific work by the members, etc., in attendance.

The social features arranged by the Local Committee were such as cannot be excelled in any country. Receptions were given Tuesday night by the Profession at the Armory; on Wednesday night by Mayor Pingree, General Alger, Mr. Geo. S. Davis and Mr. Frederick Stearns on magnificent scales; and on Thursday afternoon, an excursion up and down the Detroit river to the Lakes was most highly enjoyed. Besides these receptions, etc., a special reception was given the visiting ladies by Mrs. Hecker at her palatial residence; and a carriage ride on Thursday morning to various points of interest about the city was also specially arranged for the ladies accompanying the doctors.

In addition to all of the above, a continuous daily reception was given by Messrs. Parke, Davis & Co., at their extensive laboratory. A steam yacht made hourly trips from their wharf to that at the foot of Woodland avenue. Very

few of the delegates or the ladies accompanying them to Detroit failed to visit the Laboratory of this world-renowned firm, and none went to the receptions that was not profited and entertained. Indeed, the hospitality was of that generous cordial kind that each visitor was made to feel that he was a special guest. Every part of the Works was open to inspection, and in whatever process a visitor felt interested, one of the courteous guides took pains to explain in detail. Indeed, each visitor felt it "a treat" to be thus permitted to visit the immense Laboratory.

CLINICAL SOCIETY OF MARYLAND.

May 20, 1892. Regular Meeting. Dr. Robert W. Johnson, President; Dr. W. J. Watson, Secretary, 1519 N. Broadway, Baltimore.

Dr. Samuel Theobald related a case in which

The Electro-Magnet was Employed Successfully for the Removal of a Fragment of Steel from the Vitreous Chamber of the Eye.

The boy, aged 11 years, was first seen six days after the accident. The fragment penetrated the upper margin of the cornea, and just in line with this was a hole through the iris as large as a small pin's head. The eye was markedly injected with evidences of perhaps commencing iritis. In the vitreous humor there were diffused opacity and numerous floating opacities. The foreign body was not visible. Vision, $\frac{1}{125}$ ths. Operation after the accident, when the injection had increased and iritis had begun. Incision was made about 4 mm. in length through the sclerotic between the external and inferior recti muscles. A Hirshberg's Electro-Magnet was employed. A single cell of the battery was used; this enabled the magnet to lift up a tack hammer. The point of the magnet was introduced well into the vitreous humor three or four times without success, but finally brought out the little particle of steel the size of a pin's head. The conjunctival wound was stitched, and an opium and boracic acid lotion with compress was used. Atropia kept the pupil dilated. Boy suffered very little. Seventeen days after the operation he left the hospital, at which time the injection was very much less, the vitreous had cleared up very materially, and vision was $\frac{1}{15}$ ths. At the present time, forty-four days after operation, the fundus of the eye can be seen with perfect ease.

There are one or two floating opacities in the vitreous humor. Vision, $\frac{1}{3}$ ths.

Dr. J. H. Branham reported a case in which

A Sea-Tangle Tent was Forced into Douglas' Cul-de-sac in Attempt to Produce Abortion.

On Feb. 27, 6 P. M., saw in consultation a young married woman of 24; mother of three children. She was two months pregnant and had attempted abortion on herself with a sea-tangle tent three days before. After leaving it for twenty-four hours, she tried to remove it, but simply pulled out the string. Next morning her physician failed to find the tent, although the uterus was partly dilated, and from it issued a bad smelling discharge. When I saw her, her temperature was 103° ; pulse 120; abdomen very much swollen and exceedingly tender. The finger could be introduced into the uterine cavity, but no tent was found. An opening in the wall of the cervix was discovered, and through this the tent was felt in Douglas' cul-de-sac. It was removed through this opening, and was found to be about the size of one's little finger. An opening was made into the cul-de-sac and a drainage tube put in. The uterus and vagina were washed out with 1:4000 bichloride solution. There was a temporary improvement, but she died thirty-six hours after I first saw her.

Diurnules and Diurnal Tablet Triturates.

The *Revue de Thérapeutique* publishes a paper read by Dr. Trouette before the Paris Academy of Medicine entitled "Duodecimal Doses of Toxic Medicaments," proposing a new, safe method of administering toxic medicaments. The plan is based on the rational division into twelve parts of the maximum dose which may be given to an adult in twenty-four hours. The advantages of this method are (1) that accidental poisoning need no longer be feared; and (2) that dangerous medicaments may, from the outset, be given in efficient dose without the least risk. This new departure in therapeutical posology marks a recent enterprise of Messrs. Parke, Davis & Co., of Detroit, which is in the interests of progress, economy and exactness. They have prepared "diurnules" and "diurnal tablet triturates" of a large number of the toxic medicaments, and will afford the profession full information concerning this new method of posology with reprints of Dr. Trouette's article.

Analyses, Selections, etc.

Lecture on Enlargement of the Prostate.

Prof. C. W. Mansell Moullin, M. D., F. R. C. S., Surgeon to the London Hospital, says (*Med. Press and Cir.*, June, 1892): No one supposes for an instant that simple enlargement requires operation, but there are complications which, if they once begin, relentlessly progress until life itself becomes unendurable. These cases are the direct result of the overgrowth, and are not caused, although they may be helped, by anything else. The prostate, so long as it is normal, has nothing to do with micturition; its overgrowth is purely a local affection; the complications that set in are the direct result of the obstruction; and removal of the obstruction will prevent their development.

The Prostate, a purely Sexual Organ, not connected with Micturition.—The first portion of the urethra, as distinguished from the prostate that surrounds it, belongs, strictly speaking, to the bladder. The two are not merely continuous; they are part of the same structure, the allantois, and are absolutely distinct from the rest of the genito-urinary passages. In the Monotremata they remain distinct; the penile part of the urethra never becomes organically united to the rest, nor serves, as it does in the males of the higher orders of mammalia, for the transmission of the urine; as with the corresponding organ in the female, it retains throughout life its purely sexual character. Even in man this sometimes occurs in cases of arrested development; and in those instances of imperforate rectum in which the intestine still communicates with the urethra, the opening definitely marks the line of division between the two parts, the one above formed from the allantois, and the other below, developed in the front wall of the cloaca—the one which becomes so often the seat of overgrowth of the prostate and never of stricture, and the other which is so frequently strictured, and is never invaded by the gland. As Guthrie long since pointed out, the true sphincter of the bladder is not at what is commonly called the neck; there is no collection of circular fibres there like a sphincter; the circular coat of the bladder ceases almost abruptly, and the longitudinal bands changing their direction, sweep round obliquely and are lost in the fibrous tissue that invests the prostate. The arrangement of the first part of the urethra, above the opening of the prostatic utricle, is

the same in the male as it is in the female, with three exceptions—one is, the presence of the caput gallinaginus, which I take to be the rudimentary representative of the original intromittent organ before the penis was developed; the second is, the addition to its distal extremity of the penile portion formed out of an entirely separate structure; and the third, the addition to its circumference of a sexual organ, the prostate, and because of the support it gets from this, the reduction in thickness and strength of its own proper wall.

The sexual character of the glandular part is not in doubt; it is developed from the mucous lining in close relation with the orifices of the Wolffian ducts; it does not attain full growth until sexual maturity; in geldings it wastes away, and in many of the lower animals it varies in size and perfection of development, according to the breeding season. On a small scale, the product of its secretion mixed with that of the testes, may be compared with what Lataste has called the "bouchon vaginale" of certain rodents.

The same is true of the stroma. Its origin is from the genital cord, quite separate from the allantois. In structure it is identical, and continuous with the tissue of similar origin that invests the vesiculæ seminales. As Griffiths has shown, it wastes away in geldings, and varies in size with the breeding season, just as the gland tissue does. Women and children suffer no inconvenience from the want of it; and there is no evidence that, after castration, micturition is either assisted or unduly prolonged: it is purely sexual.

Nature of the Enlargement.—Age is no cause for it. It does not occur in the majority of old men; it bears no relation to the age they reach; and it often occurs at a much earlier age than is usually supposed. The presence of residual urine must not be confounded with enlargement of the gland. I have met with two examples of typical prostatic retention at the ages of forty-eight and forty-one respectively. McGill operated on a patient thirty-five years of age, and identified the part removed as prostatic tissue. One of Iversen's was thirty-six; and one of Mudd's, of St. Louis, only twenty-seven; in all of these the overgrowth was already some years old.

It is in no way connected with the utricle, which represents the vagina rather than the uterus. True, there is a superficial resemblance between uterine fibroids and pros-

tatic growths; but the fact that they can both sometimes be shelled out, as from a capsule, and that they consist of apparently similar elements, is no proof of the identity of the organ from which they spring.

Nor can it be due to atheroma. Guyon and Launois describe the substitution of fibrous tissue for gland as the dominant feature, whereas it is entirely secondary. In all cases examined, the first change is the invasion of surrounding tissues by a glandular growth distantly resembling the prostate—tubular with occasional acini, but arranged absolutely without order. In the younger part there is little stroma, merely a few long fibre cells arranged concentrically around the tubules; where it is older, it is much more dense, and the glandular element disappears. The existence of a median lobe is immaterial; the growth spreads up the urethra, at the sides or in the middle, until it projects as a collar or a nipple into the neck of the bladder; then it may spread back to the trigone, or lead to the production of apparently isolated tumors. If the glandular part is in excess, it grows rapidly and forms a huge adenomatous prostate; if the fibroid change is early and extensive, the enlargement is slight, but intensely hard. Whichever form it takes, it is always local, and can be dealt with locally.

Failure of the Bladder is secondary to the Enlargement of the Gland.—It cannot be explained away as the result of old age or atheroma, though undoubtedly these predispose to its occurrence. If it were, it would be much more common, whereas it is only met with in a small proportion. Guyon, who holds that it is the result of atheroma, relies upon the change which the wall of the bladder undergoes; in many cases in which it appears to be hypertrophied, it is really merely thickened and indurated; but this is due to cystitis, and not to arterial degeneration, or it would not be confined to the bladder. But the best proof is that when the obstruction is removed, many cases recover.

It is the direct outcome of the up-growth. If the lateral lobes are enlarged, without being elongated, the urethra is flattened into a slit, like the trachea in goitre; the resistance is increased, and the walls become thicker and more rigid. If, however, the growth spreads upward into the neck, projecting as a collar or a nodule, or if the lateral lobes are so elongated that they raise between them a fold of mucous membrane, the conditions are entirely different. The muscular mechanism for expulsion is thrown out of

gear; the wave of contraction, which normally spreads over the bladder on to the urethra, in the act of micturition, is broken; the orifice is closed before the cavity is emptied; a certain amount of urine remains behind, and that which fills the prostatic urethra dribbles away. Then, by degrees, those muscular fibres, whose function it is to close up the posterior fundus, being no longer equal to the task, begin to waste: the wall at the back grows thinner and thinner, while that of the rest of the bladder may become hypertrophied, and at length a definite pouch is formed. This is the beginning; atheroma, cystitis and persistent catheterism may help, but the prime cause of the loss of power is the overgrowth. Without it, in the vast majority of cases, all the various troubles that follow would never occur.

Book Notices.

Annual of the Universal Medical Sciences [1891]. A Yearly Report of the Progress of the General Sanitary Sciences Throughout the World. *Edited by* CHARLES E. SAJOUS, M. D., AND SEVENTY ASSOCIATE EDITORS, *Assisted by over 200 Corresponding Editors, Collaborators and Correspondents.* Illustrated with Chromo-Lithographs, Engravings and Maps. In Five Octavo Volumes of about 540 pages each. 1892. The F. A. Davis Company, Publishers, Philadelphia, New York, Chicago, and London. Cloth. By subscription. Price for the Five Volumes, \$15.

We look upon this as the best of annual medical publications. While some things, which have appeared in some journals during the year, that indicate advances must have escaped notice, still so much that was new and valuable is preserved in convenient and well edited form, that we are forced to value this Annual as an essential to the library or office table of every practitioner who practices medicine, in order that he may do good. It is impossible, of course, to review such a work within the compass of a journal book notice. But we hope that the expression of our opinion as to the merits of this edition, and the daily utility of such a work, will lead many of our readers to become subscribers to the "*Annual*." It is a mistake to suppose that this *Annual* interferes with the success of reputable journals; yet even if it did, nothing but that form of selfishness that brooks the greatest good to the greatest number would prompt an adverse criticism to the general design. Let the fittest survive.

Editorial.

Medical Society of Virginia.

The Twenty-third Annual Session of the Medical Society of Virginia will convene in the Ball-Room at Alleghany Springs, Montgomery county, Va., at 7:30 P. M. Tuesday, September 13th, 1892. Alleghany Springs—the popular and medicinally valuable health resort at which the session is to be held, through the courtesy of the proprietor, Capt. C. A. Colhoun—is about three and a half miles from Shawsville, which is the depot on the Norfolk and Western R. R., about nine miles west of the city of Roanoke, Va. The Session promises to be one of great interest, as a number of parties have indicated their intention to present papers, which it is to be hoped will receive thorough discussion. Several distinguished visitors have also signified their purpose to be present and to contribute papers. The President, Dr. H. Gray Latham, of Lynchburg, Va., is thoroughly alive to the interests of the organization, and will devote himself to the success of this meeting. The subject for General Discussion is *Vertigo*—Dr. P. B. Green, of Wytheville, Leader. Any papers on this subject in preparation for this occasion should be promptly announced to the Recording Secretary, Dr. Landon B. Edwards, Richmond, Va., in order that they may be named in the circular announcement of the session, to be issued early in August.

Competitors for the Prize of One Hundred Dollars, offered by Honorary Fellow Dr. Hunter McGuire for the best original Essay on TETANUS deemed worthy of the Prize, must send their *type-written* manuscripts to the Recording Secretary so as to be in his hands by August 15th, so as to be handed to the committee to examine the same and be ready with their report on the first night. If none of the Essays so examined is deemed worthy of the Prize, the Committee will so report. But if more than one is deemed worthy, then the Committee will report the two best essays, each of which will be read before the Society, and the prize awarded to the one that a ballot vote may decide to be the best. Competitors must be members of either the State Societies of Virginia, West Virginia, or North Carolina. Each essay must be designated by a motto on the first page. The name of the author must be enclosed in a sealed envelope, attached to the Essay. On the address side of the enve-

lope must be simply the motto corresponding to that adopted by the author for his Essay.

Applications for Fellowship should be promptly forwarded, with \$2 Initiation Fee, to the Chairman of the Committee on Nominations of Applicants for Fellowship, Dr. Wm. D. Turner, Fergusson's Wharf, Isle of Wight Co., Va.

Among other matters of gravest importance to be considered during this Session, are questions relating to proposed Amendments to the laws of the State, relating to the Medical Examining Board of Virginia. As the four years' term of office of members of the existing Board will expire by limitation December 31st, 1892, it will be the duty of the Medical Society of Virginia, during this Session, to nominate the thirty-two "regular" successors for the four years to begin January 1st, 1893.

Capt. Colhoun has kindly agreed to a hotel board and lodging charge of only \$1.50 per day, for all doctors, ladies accompanying them, candidates for examination before the Medical Examining Board of Virginia, exhibitors of instruments, pharmaceutical preparations, etc., during the week beginning September 12th, 1892.

Medical Examining Board of Virginia.

The Second Semi-Annual Meeting of the Eighth Annual Session of the Medical Examining Board of Virginia will be held at Alleghany Springs, Montgomery Co., Va., at 7 P. M., Tuesday, September 13th, 1892. Examinations of Applicants for license to practice medicine or surgery in Virginia will be begun *promptly* at 9 A. M. Wednesday, September 14th; so that it is important that candidates should arrange to arrive at the Springs during the day or night of September 13th. Arrangements have been made for the per diem board charge of only \$1.50 for each candidate for examination during the week of the examinations.

As several matters of great importance to the Medical Examining Board will be considered during the meeting of Tuesday night, September 13th, it is specially requested that each member of the Board will attend punctually.

Dr. Joseph Jones Honored.

We are pleased to note that the University of Georgia, at its recent commencement, recognizing the eminent services and the distinguished proficiency of Prof. Joseph Jones, M. D., of New Orleans, conferred upon him the degree of LL.D. His many learned contributions to science and literature have long made him deserving such an honor.

Dr. Hunter McGuire, President of the American Medical Association.

The great majority of our subscribers will cheerfully join in expressing a high appreciation of the honor done by the American Medical Association, during its recent session in Detroit, to the Southern States, and to its most distinguished surgeon, in electing Dr. Hunter McGuire, of Richmond, Va., as its President for the current annual term. The honor is the more appreciated because it was unsought, and because as soon as his name was suggested by admirers in other States, there was not a voice of opposition; on the contrary, even in the session of the Nominating Committee, his nomination was cordially unanimous. Since entering the profession just before the war, Dr. McGuire has been the continuous recipient of well deserved honors. As Medical Director of "Stonewall" Jackson's Confederate Army Corps, he gained national reputation because of his able services. Beginning practice in Richmond immediately after the war, he has achieved eminence in the profession by his many original practical suggestions and contributions to surgical literature and science. Having gained enviable reputation as Professor of Surgery in the Medical College in this city, he well deserved the title of Emeritus Professor, which was voted him. Time and again has he been solicited to accept professorships of surgery, etc., in colleges in medical centres of national renown, but has invariably declined all such solicitations, yet not without appreciation of the intended honors. He has filled the Presidential chair of each of the medical organizations of which he has been a member—local, State, Southern, and National, and he is now the recipient of the highest honor within the gift of the American profession. He is Honorary Member of many State and National organizations, and the title of LL.D. was conferred on him by the University of North Carolina and by the Jefferson Medical College of Pennsylvania several years ago. As a surgeon of eminent ability and success, his professional advice is everywhere regarded as the voice of an authority. As a man of impressible cordiality, of unassuming manners, of generous impulses, he possesses a widely extended personal magnetic influence over those he meets in social circles or in public assemblies. As the friend of the worthy and needy professional brother, it has been said of him that he has done more than any other professional man in the South to help young doctors to establish themselves in practice. Disciplined by early associations and

education to be quick to observe and to act, he appears at times to be a genius in quickness of diagnosis and aptness in the performance of the gravest operations. With reference to public affairs, he almost intuitively grasps the salient points of a discussion, and his good judgment as to how to direct them for the greatest good leads to practical results, which keep him in advance as a leader. And now that some matters of vital importance to the future of the American Medical Association are being agitated, it seems a peculiar fitness that he should have been chosen to preside over the deliberations of that body during its next annual session. Aided by his well chosen corps of Vice-Presidents and other officers, we bespeak for him and them the earnest co-operation of the profession of this nation, feeling assured that none of its interests will suffer while under his direction.

Conference of State Medical Examining and Licensing Boards.

The Preliminary Conference of the several State Medical Examining and Licensing Boards of the United States, which was held in Washington, D. C., during May, 1891, demonstrated the utility of such Conferences, and resulted, during the session of the American Medical Association last month in Detroit, in the formation of an organization for the purpose of holding Annual Conferences of the Members and ex-Members of each State Medical Examining and Licensing Board of the Union having such a Board.

The meeting in Detroit elected Dr. John H. Rauch, of Springfield, Ill., *President*; Dr. Wm. W. Potter, of Buffalo, N. Y., *Vice-President*; and Dr. Hugh M. Taylor, of Richmond, Va., *Secretary and Treasurer*.

As stated in the Constitution, the objects of this organization are to elevate the moral and mental tone of the Medical profession, to divorce the medical licensing from the teaching powers, to encourage the establishment of medical examining and licensing boards, to secure harmony of action throughout the Union by the interchange of thought and experience, and to attain, as far as practicable, a uniformity of requirements for practice in the several States.

The Annual Meetings are to be held during the second day and at the place of meeting of the American Medical Association. Active and ex-members of State Medical Examining and Licensing Boards are eligible to membership. No action of the Conference is in any way binding upon the respective boards through the members who may

participate in the Conference—the sole mission of the Conference being the diffusion of knowledge relative to the work of examining and licensing boards, and no Board as a board is represented or committed; but the individual active and ex-members participate in the meetings and give and receive information which will help them in their work.

Members and ex-members of examining and licensing boards who have not already connected themselves with this work are cordially invited to signify to the officers their willingness to do so. Such an organization is capable of accomplishing great good. But, in order that its mission may be carried to its highest possible end, it is necessary to have the active co-operation of many representatives from all the boards.

Tri-State Medical Society of Alabama, Georgia and Tennessee

Will hold its Fourth Annual Session in Chattanooga, Tenn., October 25th, 26th and 27th, 1892. The membership is not strictly limited to the profession from the States named in the title of the Society, but men of eminence from other States may be elected. Under the vigorous management of its present corps of officers, it is needless to assure our readers that the coming session will be a great success. The mention of the names of Dr. W. E. B. Davis, of Rome, Ga., as President; Drs. D. H. Howell, J. C. Shepard and J. P. Stewart, as Vice-Presidents; Dr. Frank Trester Smith, of Chattanooga, as Secretary; Dr. W. L. Gahagan, of Chattanooga, Tenn., as Recorder, etc., give surer ties of active work and successful results. Papers for the session are already promised by the President, by Drs. I. N. Love, of St. Louis; J. W. Cowan, of Tullahoma, Tenn.; E. B. Ward, of Selma, Ala.; J. M. Head, of Zebulon, Ga.; John L. Howell and J. N. Masters, of Knoxville, and C. S. Briggs and Richard Douglas, of Nashville.

Southern Surgical and Gynæcological Association.

The Annual Session of the Association will be held in Louisville, Ky., on November 8th, 9th and 10th. Those proposing to assist in making the meeting a success by the contribution of papers should promptly notify the Secretary, Dr. W. E. B. Davis, of Rome, Ga., of the titles at their earliest convenience. To those desiring to nominate candidates for membership, blanks will be furnished on application. Dr. J. McF. Gaston, of Atlanta, Ga., is President, and is actively at work to make this session as great a success as any of its predecessors.

In Memory of Prof. T. G. Richardson, M. D.

MEDICAL DEPARTMENT,
TULANE UNIVERSITY OF LOUISIANA,
NEW ORLEANS, LA., May 30, 1892.

The following resolutions were this day unanimously adopted by the Faculty:

WHEREAS, Prof. T. G. Richardson, M. D., was called to New Orleans as a citizen by the Medical Department of the Tulane University of Louisiana, and continued his connection therewith from April 19, 1858, until severed by death, May 26, 1892, and having given to the Medical Department thirty-one years of active service, fourteen years as Professor of Anatomy, seventeen years as Professor of Surgery, and twenty of these years as Dean; and having also given, during the last three years of retirement from active service, the most convincing proofs of his great devotion to the present and future welfare of the Medical Department,

Resolved, That Prof. Richardson, endowed by nature with physical, mental and moral superiority, was pre-eminently distinguished for his culture and skill as surgeon and physician, which gained for him national reputation, and rendered him one of the most instructive and popular of medical teachers; for exceptional scientific attainments, which, while broadening his views of nature's God, left him none the less firm in his Christian faith; for his courage and patriotism in war and his benevolence and philanthropy in peace; for his moderation and wisdom in council, and for his zeal and ability in executive administration; for his inflexible devotion to truth, honor and duty; for the strength of his friendships in adversity as in prosperity, and for the fidelity, tenderness and devotion given to his beloved and honored wife.

Resolved, That by the death of this strong, wise and good man the Medical Department has lost its most valued friend and counsellor; the medical profession its most honored representative in New Orleans; the State of Louisiana a citizen unsurpassed for patriotism and for worth; his friends a heart to love and a hand to help them, and his wife and family one who has left precious memories of a loving, virtuous and noble life.

Resolved, That at the next annual commencement, April 5, 1893, memorial addresses upon the life and services of Prof. T. G. Richardson, M. D., shall be delivered.

STANFORD E. CHAILLE, M. D., Dean.

Medical Society of North Carolina.

The Thirty-ninth Annual Session, presided over by Dr. W. T. Cheatham, in Wilmington, May 17, 18, and 19, was a great success. Dr. J. M. Hays having removed to Washington, D. C., Dr. R. D. Jewett, of Wilmington, N. C., was elected as his successor. Dr. J. W. McNeill, of Fayetteville, was elected President for the year 1892-3; and Dr. M. P. Perry, of Macon, Treasurer. Winston was selected as the place for the next annual session, at such time as the local Committee of Arrangements might decide. Dr. M. E. Robinson, of Goldsboro, was expelled from the Society for advertising and vending a nostrum. He entered into a contract with a proprietor of a nostrum, whereby a certain sum of money shall be paid the proprietor for each patient treated therewith.

Pan-American Medical Congress.

The officers and committeemen of the Congress held a conference at Detroit during the meeting of the American Medical Association. Dr. William Pepper, of Philadelphia, President of the Congress, made a brilliant speech, in which he outlined the plans for the great gathering and called attention to the fact that it was necessary to push matters rapidly, as the Congress is to be held in September, 1893, and a great deal of work will have to be done in preparation. Dr. Charles A. L. Reed, Cincinnati, Secretary-general of the Congress, spoke eloquently and practically on what work had been done and what remained to be done. He said that pamphlets concerning the event would have to be published in English, Spanish, and Portuguese, and this would involve heavy expense. Items for other printing, clerical work, correspondence, etc., necessitate a good fund in advance. He hoped members of the profession would come forward by the hundred and register for the Congress at \$10 per head. It was suggested that all those present should consider themselves as financial committeemen. Every one promised to do his best to secure names, some assuring Dr. Reed of at least thirty from their respective States.—*Medical Age*, June 10.

Medical and Surgical Society of Mississippi.

For some reason not explained in any publication we have seen, a large number of most excellent practitioners in Mississippi—many of whom participated in the recent session of the Mississippi State Medical Association at Natchez—created and constituted themselves on May 28th

as "a body corporate," under the title above given. The incorporators, it would seem, are to meet, soon after the approval of the charter by the Governor of the State, for organization, etc. "The object and purposes of said organization are:—The advancement of the science of medicine in all its departments, the discussion of medical subjects, the improvement of the medical profession, and the cultivation of social and friendly feeling among its members." "Said Society shall have power * * * to adopt a code of ethics, and to prescribe and enforce penalties for the violation of the same by its members." We do not know whether or not this Society will seek or obtain recognition by the American Medical Association as the representative State organization of Mississippi, for we have nothing beyond the general terms of the charter by which to shape an opinion. But we trust that nothing less than harmony and brotherly love will prevail.

Medical Editors' Banquet.

One of the most enjoyable events of the Detroit session was the banquet given by Mr. George S. Davis, of Detroit, to the forty editors of as many medical journals who attended the session of the American Medical Association. The entertainment was given in the rooms of the Detroit Club. The tables were handsomely arranged and decorated with smilax, roses, and rare china. Music by an orchestra band and by the Mendelssohn Quartette was a part of the program while the many courses of the *ménu* were being enjoyed. Dr. F. W. Mann, of Detroit, presided as toastmaster, and until the early hours of morning toasts and responses in their happiest style were indulged by some of the best of post-prandial speakers. In response to an impromptu general call for Mr. Davis, Mr. Wm. E. Quinby responded for the modest host. The compliment to the Editors will not be forgotten in their appreciation of the occasion.

Board of Medical Examiners of the State of North Carolina.

Session was held in Wilmington, N. C., May 16, 17, 18, 19, and 20, 1892. Dr. W. H. Whitehead, President; Dr. L. J. Picot, Secretary. Two examinations were held daily, with three on Wednesday. Examinations were written. Standard, 80 per cent. Of the 69 applicants who presented themselves for examination, only 45 were granted licenses, or 65.2 per cent. Dr. E. J. Buchanan, of Salisbury, made the highest grade on all branches, and to him, therefore, was awarded the "D. Appleton & Co. Prize."

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Original Communications.

ART. I.—**Morbid Anatomy, Cause and Treatment of Acute Nephritis.***

By **LUTHER SEXTON, M. D.,** of New Orleans, La.

LECTURER AND CLINICAL INSTRUCTOR ON MINOR SURGERY, TULANE UNIVERSITY
OF LOUISIANA.

The kidneys are considerably increased in weight and size in acute nephritis, from the amount of blood and new inflammatory material found in them; they often weigh from eight to ten ounces. The capsule of the kidney has been known to rupture from this pathological state. A transverse section of such a kidney shows it to be acutely inflamed and dripping with blood. The capsule peels off easily in this stage, revealing minute ecchymotic spots; the pelvis of the kidney also partakes of the inflammatory process, is deeply injected; the urine is mixed with serum, pus, blood, and epithelial *débris*. The malpighian bodies may be observed by the naked eye as red dots. Microscopically, the uriniferous tubules are found also to be in an inflamed condition, choked up with blood corpuscles, large granular epithelial cells, and fibrin. This plugging up of the tubuli uriniferi, so as to prevent the secretion

* Read before the Orleans Parish Medical Society, May 25, 1892.

and passing out of the urine, accounts for the sudden deaths in the early stages of nephritis, from leaving the waste products which should be eliminated by the kidneys to remain in the system. The vessels of the malpighian bodies are distended with leucocytes; the vascular excitement usually subsides as it expends itself in secretion—that is, if free epithelial growth can take place; this, however, is hindered by the narrowness of the tubes and the tortuosity of their course.

Inter-tubular tissue may be involved later on in the course of the disease; the tubes may lose their lining epithelium and become atrophied. Numerous round cells infiltrate into the inter-tubular connective tissue. The pressure of this new inflammatory product upon the microscopic anatomy of the kidneys hinders the circulation in the parts, ultimately producing the atrophy of the malpighian bodies and shrinkage of the tubuli uriniferi, which, in the later stages of the disease, is almost entirely devoid of epithelium. The convoluted tubes are sometimes found to be packed with an epithelial conglomeration, held together with fibrin, forming as complete a cast of the tube as it would be possible to obtain from a plaster-of-Paris injection, if such a procedure were possible. It is only when these casts are found in addition to albumen that we are justified in making a diagnosis of Bright's disease, as albumen is often found in the urine temporarily, which, pathologically, does not amount to much. When, from any circumstance, the fluid of the blood enters the tubes, the watery portion is all that can escape as fluid. The fibrin coagulates when brought into contact with the phosphoric and other acids of the urine.

The uriniferous tubes act as moulds for this new material, which coagulates with its epithelial cells, leucocytes, blood disks, or whatever else the tube may contain at the time. In other cases these casts seem to be formed from the denuded walls of the tubes, which have been the seat of disturbed epithelial growth; these casts differ in size as

well as in material, some coming from the smaller convoluted tubes, others from the larger and straight tubes.

These casts, usually found in albuminous urine, are—1st. Epithelial casts, consisting of agglomerated epithelial cells found only in acute nephritis. 2nd. Hyaline casts, which are transparent, colloidal, amorphous, and translucent. Some authors have contended that they are a colloidal transformation of the epithelial cells; others consider them to be an exudation of blood serum. These casts are only found during the acute period of renal inflammation. 3rd. Granular epithelial casts: these are usually associated with faulty degeneration. 4th. The waxy casts, which are yellow in color, large in form, belonging mostly to the chronic stages of nephritis.

As a rule, fibrin is the basis of urinary casts, but occasionally we find them made up of epithelial cells in conjunction with any other *débris* which may be in the uriferous tubules. From the microscopic examination of these casts, which is virtually a post-mortem examination of the living patient, we can judge of the progress of the lesions in the kidney proper.

When epithelial cells are found in the casts, there is a catarrhal inflammation of the tube which promotes the growth and attachment of the cells; numerous pus cells will show an advanced stage of inflammation, and that instead of epithelial cells being developed, pus globules take their place. If the casts are not more than 1-1000th of an inch in thickness, they most likely come from tubes which retain their epithelial lining; if 1-500th of an inch, or thereabouts, they have slipped down from tubes devoid of epithelial lining. The question naturally arises in our minds, Why should urine contain albumen when the kidneys are thus diseased? Is the albumen a new and pathological product, or is it simply the serum of the blood sipped into the urine? We know that the urine becomes temporarily albuminous, either from injecting albumen directly into the veins, or from ingesting large quantities of albuminous food. These, however, are exceptional con-

ditions; but when the urine contains albumen continuously, one of two pathological conditions exist, viz., the kidneys are either diseased in structure or circulation. Albumen is a glue-like substance; its appearance in the urine after renal dialysis, is proof positive that the kidney laboratory is out of gear. It is the serum of the blood which has sifted from the blood vessels into the urinary duct which renders the urine albuminous. Dickinson gives us the causes of this unnatural waste:

1st. Congestion, producing undue pressure within the vessels supplying the glandular structure.

2nd. Lardaceous changes in both the blood and the vessels.

3rd. A loss by the secreting tubes of their lining epithelium, permitting the passage of fluids which could not otherwise transverse them unaltered. The congestive theory of the production of albumen in the urine is proven by putting a ligature upon the renal vein, causing an increased pressure upon the malpighian bodies enclosed within the convoluted tube, causing a transudation of serum into the tube; this is the pathological state in cardiac obstruction and renal irritation, which produces albumen in the urine.

The second, lardaceous change, is not pertinent to this article.

The third is where we have albumen in the urine from the defect in the tubuli uriniferi, which, in their physiological state, consists of a thin membrane interlaced with capillary blood vessels, on the outer side; the inner surface being covered with epithelial cells. The secreting power of the gland lies in its epithelial cell. After these cells have sloughed off, the serum of the blood can pass through the capillaries and tubes with scarcely any change in its composition; with these pathological changes existing, both acting conjointly very often, are the immediate causes of the albumen in the urine. The simplest test for its presence is by heat and nitric acid. It is of such common occurrence in damp climates, after scarlatinal epidemics, and

in subjects addicted to the use of alcoholic beverages, that this simple test should form a part in the diagnosis of every suspicious subject applying to us for medical advice.

The *causes* of acute nephritis are as varied as the pursuits and habits of man, but they can be grouped into the following general classes:

1st. Conditions which force the kidney to act vicariously for other glands; as in suddenly checking perspiration the function of the skin is thrown upon the kidneys, obstructing to the escape of bile, causing it to pass off in the urine. Extirpation or destruction of one kidney, thus throwing double work upon the other. Free drinking of ice-water has also been considered a cause.

2nd. Effects of certain diseases which seem to produce a renal irritant in the blood, as erysipelas, diphtheria, scarlatina and measles, etc.

3rd. Certain obstructions to the venous circulation as are produced by tumors, the gravid uterus, and certain heart diseases. Some contend that malnutrition, or the elimination of *effête* material, instead of pressure, is the cause of albumen in pregnancy.

4th. Certain drugs and stimulants, which, taken internally, have the property of setting up renal irritation; as, carbolic acid, phosphorous, arsenic, lead, cantharides, alcoholic preparations, turpentine, and balsamic preparations.

5th. Extension of inflammation, as from stricture, or urethritis, or stone in the kidney.

The *extremes of age* are not very liable to acute nephritis. It is much more common in the male than the female, owing to their professions exposing them more to the inclement weather, and their freer use of alcoholic stimulants. Sir R. Christison estimated that three-fourths of the nephritis in Edinburgh was dependent upon the free use of alcoholic stimulants. Mr. Dickinson demurs to this, and claims, by an ingenious set of figures, to prove that alcohol is more sinned against than sinning in the etiology of nephritis. While Mr. Christison's figures may be too

high—viz., three-fourths—there is no doubt, however, but that the stronger alcoholic beverages are very productive of this disease, not only by their irritating action upon the kidneys, but the exposure their use entails, by their over stimulation of the renal function and the direct poison which they introduce into the blood. I do not think this holds true in the ordinary beer drinker, provided nothing stronger is ever indulged in. The operators around our brewing establishments rarely touch water, drinking nothing but beer every day. An examination of specimens of their urine fails to find a much greater per cent. of albumen than in the same number following other pursuits. Acute nephritis has been attributed to a bacillus by Blanc, and by Hopkins to a coccus, which presents themselves as rods and spores. Any degenerated urine is liable to contain bacteria, but as yet it is not proven that any one germ is the cause of acute nephritis.

Paradoxical as it may seem, judging from the heavy mortality in nephritis, there are few pathological conditions more amenable to treatment than catarrhal inflammation of the kidneys. The indication for treatment in the first stage of this disorder is the immediate removal of any possible exciting cause, and the antiphlogistic treatment of the kidney structure. If any medicines have been taken which could possibly act as renal irritants, they should be stopped; if stricture exists in the urethra, it should be dilated; if the subject has the alcoholic habit, it should be stopped instantly. For lumbar pain and hyperæmia, tincture of iodine acts well, applied over the position of the kidneys, to take the place of sinapisms and vesicatories, recommended by some of the older authors. The iodine, after being applied several times, seems to act as a plaster and support for the back, besides, the small portion which is absorbed may possibly act as an alterative upon the inflamed organ.

In a general way venesection is contra-indicated in this disorder owing to its natural tendency to anæmia. Occasional dry cups over the kidneys, however, do not share

in this criticism, and have done good in several cases under my care. The application of warmth and moisture to the lumbar region in acute cases affords the greatest relief, and should be kept up constantly, either by flannel cloths being wrung out of hot water, the hot-water bag, or hot poultices of flaxseed meal, applied over the lumbar region.

From what has been said in regard to the pathology of this disorder you will readily see that the danger lies chiefly in the obstruction of the uriniferous tubules; the minuteness of their lumen, and the tortuosity of their course increases this risk of the plugging up of these tubes; as the dislodged epithelial covering slips down from one loop to another gravity aids in settling this *débris* in the lowest curve of the tube, thereby obstructing its natural physiological action.

The watery urine by the majority of physiologists is supposed to be secreted by the malpighian tufts which rest mostly above the tortuous portion of the tube. Rationally, then any agent which would increase the amount of watery secretion of the urine, without stimulating the already irritated renal gland, is the natural remedy suggested for the relief of these clogged tubes. We have such a remedy in the various mineral waters of numerous springs and wells, which nature seems to have distributed uniformly for the general relief of afflicted humanity. I do not know that any one of these waters has any particular advantage over another in acute nephritis, and, in fact, am not sure that common spring or well water is not as effectual; but having had some recent experience in the use of Stafford Springs water, from Vossburg, Miss., will record the result of my clinical experience with them.

The advantage from these waters, in my judgment, as intimated above, depends not so much on what they contain (for the chemical analysis does not give any remarkable curative ingredients not found in various other springs and wells) as the quantity ingested daily. Water we know to be the most simple diuretic we can take, and when freely

ingested tends to wash out any *débris* likely to occlude the opening of the uriniferous tubules.

Mr. H., for instance, who has been in the daily prints of our city papers during the past month, held up as an example of what Stafford Springs water would do for Bright's disease, is a living example of the truthfulness of this statement in regard to the amount of water drunk. During the past four months he has drunk two gallons per day, or two hundred and forty gallons of this water, and passed two-thirds as much out by the kidneys, viz., 160 gallons; though he had nine uræmic convulsions, and his life had been despaired of, taking such large quantities of this water seemed to have a marvelous effect upon him, so much so that he is up and about his duties now, though not well. I have had half a dozen patients on this water, and find considerable improvement in each one; but in direct proportion to the amount they can ingest, I also find that where it clears the albumen out of the urine, if examined at midday, that the first urine passed in the morning, not being diluted with the water, contains albumen and casts—*i. e.*, when the case is far advanced.

There is no denying the fact that these mineral waters are helpful, and you can get patients to drink them under the delusive hope that they contain some curative ingredient for the kidneys. I have always found it impossible to get patients to drink water freely in these conditions; their dropsical tendencies seems to prejudice them against the use of water; this prejudice, however, does not seem to prevail against mineral waters.

Mr. Bohn, resident student of the Charity Hôpital, reports the following as his experience in the use of these waters and milk diet as a treatment of nephritis:

G. S., white female, 30 years of age, resident of New Orleans for the past five years. She is a prostitute, and a subject of tertiary syphilis; she is addicted to the use of tobacco, and, by her own statement, a heavy whiskey-drinker; she states that about two or three months ago she was taken with severe lumbar pains accompanied with vertigo and

scanty urination. These symptoms were soon followed by beginning œdema of the extremities, which gradually increased until her admission to the hospital, when she was found generally anasarcaous, with difficulty of respiration, and her urine loaded with albumen and casts. Previous to her admission, she had been under the treatment of several physicians. Upon her entrance to Ward 51, on May 4th, 1892, she was immediately ordered rest in bed, and put on the Vossburg mineral water, being told to drink as much as she could during the day and night; a strictly milk diet was also ordered her, which constituted the entire treatment save two purgatives with compound jalap powder. She commenced by drinking three to four quarts daily, but for the last three or four days she has only been taking about half of that quantity. At the present writing her condition is slightly improved—the anasarca disappearing in a great measure, though ascites is still present, but withal her general state of health is better.

Appended are the reports of the urinary examinations made during treatment, the effect of the diminished quantity of water drunk the last few days being clearly shown by the last report.

May 6th. Alubmen, 30 per cent.; hyaline, granular and waxy casts, leucocytes, red blood cells; sp. gr. 1011.

May 13th. Albumen, 30 per cent. Every kind of casts found in the urine, leucocytes, and red blood corpuscles; sp. gr. 1004.

May 18th. Albumen about 27 per cent.; granular casts, red and white blood corpuscles, bacteria and granular matter.

May 24th. Albumen, 20 per cent.; hyaline and granular casts; leucocytes and bladder cells; sp. gr. 1006.

From the above it will be seen that during eighteen day's treatment the albumen was diminished 10 per cent, though she did not use the water as freely as advised.

As a matter of course, all stimulating diuretics are contra-indicated in this inflamed condition of the renal organ. We must also enforce a minimum allowance of nitrogenous food as urea and uric acid, which is the waste product of such foods, act themselves as renal irritants.

Physiological repose for the inflamed kidney is the one great desideratum. Spare diet and abundance of water is a splendid axiom in the treatment of this disease; it is on

this plan that the skim-milk diet has received its greatest advocate. Cream of tartar lemonade is a pleasant sub-acid drink, being especially indicated if constipation is an accompaniment of renal disorder.

Owing to the frequency of heart complication with nephritis the infusion of fresh leaves of digitalis may sometimes be used to advantage, but the indiscriminate use of fluid extracts and tincture of digitalis are apt to do as much harm as good from the increased arterial tension which they bring about and their diuretic properties.

Diuretics, purgatives and sudorifics have all been advocated in turn for the relief of the anasarca, multiple effusion, and uræmic condition associated with nephritis. Diuretics may do good or harm, according to the stage of the disease in which they are used and the nature of the diuretic; if in the congestive stage, they merely add fuel to the fire, for we know, by their use in health, that albuminuria can actually be produced by the continued use of the stimulating diuretics. They are useful to relieve effusions and anasarca conditions in the more advanced stages; also to sluice, as it were, the gutters of the kidneys in order to wash out the pus, blood, and renal epithelium that accumulates in the tubuli uriniferi. Among the diuretics which are most used for these conditions are infusions of digitalis, squills, uva ursi, and broom top; a tea of the watermelon seed, eating the green sugar cane freely, are domestic remedies, superior in many instances to some of our standard therapeutic preparations. The general use of diaphoretics, at one time so popular, has lost many advocates since the pathology of the disease is better known. Their vicarious action for the kidneys, diverting the water through the skin, is not thought so well of since it has been found that we need the water to keep the uriniferous tubes washed out, instead of turning it through the skin by steam and diaphoretics.

In the earlier stages of the disease, the use of diaphoretics is prejudicial; but later, in dropsical and uræmic conditions, the warm steam baths, under blankets, or an

injection of pilocarpin, from one-fourth to one-eighth of a grain, produces free diaphoresis, and at times seems to prevent an impending attack of uræmic convulsions—the end here justifies the means. Persistent warm baths, however, weaken the patient. Jaborandi and other diaphoretics by the mouth, often do more harm to the stomach and heart than good to the kidneys.

Hygienic and dietetic treatment often do more good than any kind of medication. The skimmed milk and vegetable diet should be a part of the treatment of every case. We cannot, however, rely upon them alone; hence we fall back to the use of purgatives, which act beneficially in three ways, viz.:

1st. As revulsives, by irritating the mucous membrane of the bowels.

2nd. A hyper-secretion of the glands of the intestines, in this way depleting the vascular system, thereby combating œdema.

3rd. And most beneficial way is by clearing the system of toxic uræmic secretions by passing them off by the bowels, thus relieving the kidneys of some of its hardest work.

Bitartrate of potash lemonade, comp. jalap powder, occasional doses of calomel and soda, Glauber's salts, saturated solution of magnesia sulphate are usually found to answer the indications, without having to resort to croton oil or elaterium, only in the most desperate cases where immediate relief is needed.

A word of caution comes in here: The old plan of purging one night and sweating the next is as manifestly harmful, in unnecessarily weakening the patients, as the neglect of keeping the bowels gently open would be. Debility as certainly follows this depurative plan of treatment as it would generally blood letting.

It is a well-known fact, that the liver and kidneys have a sort of vicarious action for each other; therefore, when the kidneys are flagging, it is well to stimulate the liver. The various cholagogue cathartics may be used cautiously

in turn, until the most agreeable one is found, which should be kept in use, in moderation, during the course of the disease.

The next desideratum to be accomplished is the hygienic and dietetic treatment of the patient; rest in a warm bed, in a large well ventilated room, wearing flannel next to the skin to prevent change of temperature, with a vegetable and milk diet, are about the best hygienic surroundings and diet we can suggest.

I would specially commend the milk diet, from the fact of its being a gentle diuretic as well as a nutritious food. Fresh milk from the cow, combined with lime water or seltzer, butter milk and skimmed milk, should be alternated in turn, so as to not disgust the patient with a single article of diet always in the same form.

Owing to the tendency of this disease to anæmia some preparation of iron would seem indicated. I have tried both the citrate of iron and quinine and syrup of iodide of iron, from both of which I have obtained meagre beneficial results. Any internal medication, however, which deranges the digestion, should be stopped at once.

Liquor potassa arsenitis has been recommended by some, but its tendency to the production of œdema has precluded its use in my practice to any great extent.

Dr. Robinson, of Leeds, uses trinitrin, especially if there is heart trouble or dyspnoea; it is a diffusive arterial stimulant, whose action, if carefully guarded, may result in good.

With lactate of strontium I have failed to reduce the albumen very materially, or to notice the beneficial results recorded by Prof. Dujardin Beaumetz, who says that the albumen was reduced three-fourths in his case after four days' trial. I have one patient who has been taking the lactate of strontium for four weeks, taking fifteen grains three times daily, also drinking one gallon of the Stafford Springs water each day; during this treatment the albumen has decreased from twenty five to fifteen per cent., but increases as soon as treatment is stopped. I think if the patient

could have taken two gallons daily, with a skimmed milk diet, the result would have been different or more marked in improvement.

There is a school of pathologists who claim Bright's disease to be primarily a blood dyscrasia, then a neurosis. Upon this pathological construction, they use, and occasionally with good results, various alterative remedies; such as iodide and bromide of potassium, syrup trifolium, compound tincture of iron, and other tonics.

Of the alterative preparations I have tried, I have obtained the best results from arsenite of copper, which in from one fiftieth to one hundredth grain doses has a marked effect in reducing the albumen in the urine, but like the other agents its effects seem to be transitory, the albumen recurring as soon as the medicine is stopped.

The inhalation of oxygen gas is another agent that notably reduces the amount of albumen in the urine. There is a probable change in the nutrition in the blood, which prevents the leakage of albumen.

Oxygen is too expensive for general practice; besides its benefits are not lasting. Four grain capsules of fuchsine three times daily has reduced the quantity of albumen in several cases; it has the advantage of being well borne; also has slightly antiseptic properties—should always be given in capsule to keep from staining the teeth. In the more chronic forms to prevent the tendency to uræmic convulsions, chloroform has been used to great advantage; it acts speedily in most cases. Hypodermic injections of one-sixth gr. morphia and 1-120th gr. of atropia have given the best results in my practice.

In three cases of uræmic convulsions from pregnancy, these hypodermics had the desired effect after all other remedies had failed.

Preparations of opium, as a rule, are contra-indicated; too much stress, however, has been placed upon this. In carefully selected cases they accomplish great good, especially during convulsions of pregnancy.

Such, gentlemen, are the principal indications to meet and the remedies which have been most useful in my experience in combatting acute nephritis.

ART. II.—Some Observations upon Cataract Operations and After-Treatment.*

By **A. W. CALHOUN, M. D., LL. D.,** of Atlanta, Ga.

PROFESSOR OF DISEASES OF EYE EAR AND THROAT, ATLANTA MEDICAL COLLEGE, ETC

In reporting operations upon 904 cases of cataract, it is not intended to go into the details of each case. I desire only to give my experience as to the best preparatory and after treatment, based upon these cases. The records of the first 47 cases have been lost; so that this report embraces the records of only 857 cases, though in reality 904 have been operated upon. This number includes 203 cases of soft cataract in children and young adults, and 654 cases of hard senile cataract.

The ages of the children and young adults ranged from three months up to 25 years of age. The ages of the others ranged as follows: 138 from 25 to 40; 82 from 40 to 50; 98 from 50 to 60; 157 from 60 to 70; 140 from 70 to 80; 28 from 80 to 90; 11 from 90 to 94, making 654 cases of hard cataract, which, including the 203 soft cataracts, make the 857 cases.

The preparatory treatment of both the soft and hard varieties was about the same. The operation of needling or dissection was made in the soft variety, and with few exceptions with satisfactory results. Needling is a simple process. After dilating the pupil with atropia, so as to free the lens from the iris, a cataract needle is passed through the edge of the cornea into the anterior capsule of the lens, and the capsule is more or less freely lacerated; this allows the aqueous humor to come in contact with the broken lens substance and thereby the lens is slowly ab-

*Read before the Medical Association of Georgia, April, 1892.

sorbed. I usually wait about a month after the first operation, and then repeat it through the cornea and dilated pupil. If necessary, at the end of another month the operation is repeated, and after two or three operations the cataract is entirely absorbed. The patient gets well with a clear and circular pupil. If no complication exists there is very nearly normal vision.

The balance of this report will be confined to the *treatment of hard cataract as we find it in adults*, and as a great many of the gentlemen present have not probably made cataract operations, they will pardon me if I go somewhat into details.

The preparatory treatment, in the first place, is to correct any inflammation that may exist about the eyeball or lid. In a large number of cases, when the patient comes for treatment, there is some simple inflammation of the conjunctiva. My rule is particularly to see that this is corrected before the operation is made. I also investigate the condition of the nasal duct, and correct any abnormalities of that, if such exist. After these inflammations are all corrected, the operation can safely be done. When ready to perform the operation, as a rule, the night previous, I give a simple purgative and sometimes five grains of quinine. This is routine treatment, and I have gotten good results from it. I see that the room is properly dusted and thoroughly aired the morning before the patient is put to bed, and that the bed linen is clean. The operation is made upon the patient in bed, and he is kept there for several days thereafter.

Antisepsis. I cannot urge you too strongly to carry out the details of antisepsis. The results are good. The antiseptic I use here is the bichloride of mercury solution. I wash the patient's entire face thoroughly with warm water and castile soap, after my assistant and I have antiseptically cleansed our hands. I then wash the conjunctiva of the eyeball and lid with bichloride of mercury solution, 1:10,000, (which is equivalent to one-third of a grain to six ounces of boiled water.) The lid is everted and washed

thoroughly with the bichloride solution, and by means of a pipette the eyeball, the cornea and conjunctiva are irrigated with the solution. I never use a sponge, but use absorbent cotton very freely, which is cleanly and more satisfactory. My results have been so good since using the bichloride of mercury, in the strength mentioned, that I steadily stand by it. Before the antiseptic treatment was used, I thought I was getting good results when I had 95 per cent. of successes. Now, if I do not have practically a hundred successes out of 100 patients, something is wrong. Possibly the instruments were not kept altogether as clean formerly as now. If you will read the statistics of the English hospitals, you will find that up to fifteen or twenty years ago they lost from 15 to 20 out of 100. Under antiseptics it has improved until we find very few bad results, except now and then from accidents.

Anæsthetics. Ophthalmic surgeons in this country formerly used chloroform, but since the advent of cocaine the use of chloroform in eye surgery has been relegated to the past, as there is hardly any necessity for it. There are a great many disadvantages connected with the use of chloroform, and we get most satisfactory results from the use of cocaine. I use a one-half of one per cent. solution. My prescription in these cases is: Muriate of cocaine, $\frac{1}{2}$ grain; bichloride of mercury solution, (1 to 10,000), a drachm. I cocainize both eyes, although I only operate upon the one. If one eye only is cocainized there is a certain degree of sensitiveness and dread which the patient does not have when both eyes are cocainized, and for that reason I anæsthetize both.

Instruments. It is necessary that the instruments used in cataract operations should be absolutely clean. I drop my instruments in boiling water by the bedside, and leave them in a few moments, take them out, and dry them with absorbent cotton. As each instrument is used, it is momentarily placed in the bichloride solution. There are a few instruments that are apt to carry improper material into the eye. On the small iris forceps used in making iridectomy, minute particles of blood are liable to remain; around

the shoulders of the cystitome is also a favorite place for material to lodge, which, if inserted into the eye, becomes dislodged, and may produce serious results. Get rid of this by boiling your instruments previous to the operation. While we cannot lay too much stress upon the purity of the atmosphere of the room, if we take it for granted that the atmosphere is injuriously impure, we would naturally suppose that unpleasant results would follow after opening the eyeball. As a matter of fact we do not. Often when I open the eyeball there is immediately a bubble of air that enters the anterior chamber. You can see it distinctly; it comes from the room, and we know that the atmosphere of the room is not perfectly pure. In the progress of the operation I try to dislodge this bubble of air, and as a rule I succeed. If I do not dislodge it, I let it alone until it is absorbed. I have not known of a single bad result following this bubble of air getting into the anterior chamber.

The preparatory treatment just detailed applies both to the soft and hard variety of cataract. I make discission upon a child with soft cataract and carry out the same process of preparatory treatment adopted in the case of adults.

The question to be decided always by the surgeon is, when to make the operation? Patients often come with cataract in a state of immaturity. You have common workmen who are too blind to carry on their daily avocations, but the cataract is not yet ripe. What are we to do with these cases? Formerly we told them that their cataract was not ripe, and that they must wait until it was perfectly mature. That is a sad bit of news to a man who depends upon his daily labor. He cannot work, and you therefore send him home practically blind to live upon his friends. We have made great progress in this respect. There are those who hasten maturity by the needle, lacrating the anterior capsule. That is sometimes done, though I am opposed to it. I would suggest instead a preliminary iridectomy, which gives the patient more vision, and prepares him for the operation a little better, probably, than he other-

wise would be. If the patient is barely able to get about, and yet has not sufficient vision to attend to any work, I do not hesitate to make the operation just as though the cataract was a matured one. You might ask, what do you mean by matured cataract? I mean that the lens has become so opaque, so thoroughly obscured by the opacity of the lens substance, that the patient is no longer able to count fingers at a distance of even one or two inches in front of him. If able to count his fingers at four or ten inches his cataract is immature. The patient is able to go about, but he cannot work, and if he is willing to submit to the operation I make it, and thus far I have no cause to regret it.

The operation for the hard or senile cataract is that known as extraction. You take out bodily the diseased lens. The operation usually made is known as von Graefe's, although very few operators follow it closely. They deviate from it more or less just as their own experience induces them to do so. After the corneal cut, follows a partial iridectomy (or no iridectomy, as the case may be); and following that, the breaking up of the capsule of the lens and delivering the lens from the position it occupies in the interior of the eye, through the corneal cut. That, in a few words, is extraction.

There are two points of discussion about cataract extraction, viz.: extraction, with or without iridectomy. Simple cataract extraction means that you remove the cataract without disfiguring the pupil by an iridectomy. Removing the cataract with an iridectomy means cutting out a portion of the iris, leaving, instead of a circular, rather an oblong pupil. Both have their advantages and disadvantages. The advantages, I think, predominate with extraction with iridectomy. Simple extraction is a very beautiful operation, but is nothing new at all. A German physician discovered that by making an iridectomy he could deliver the lens easier, and a great many good results followed the operation. Since that day we have had extraction with iridectomy. The advantage of simple extraction lies chiefly in the fact that the iris is left with a perfectly circular pu-

pil. The ball looks natural, and no one would know that the patient had ever had cataract. Actual statistics prove that the vision of patients with the circular pupil is no better than with an oblong pupil. The advantage of extraction with iridectomy is that the lens is much more easily delivered from its position in the eyeball. With iridectomy you avoid pressure upon the iris, and the danger of prolapse of the iris and iritis largely disappears. Iritis without iridectomy is common. Another advantage of iridectomy is that we can get the cortical substance out more readily as the lens is extracted from the ball. The edges of the corneal wound pull off some of the lens substance which is retained in the eyeball, and with a pupil perfectly circular, it is very difficult to get this soft substance out, and as a result it remains and often becomes a source of iritis. This is also the cause of secondary cataract; it becomes thick and opaque, and a secondary operation is required. In a number of instances your patient must return at the end of six months and submit to another operation. The advantage of an iridectomy is that it is seldom needful to make an operation for the relief of secondary cataract. I do not find any of the cortical substance remaining behind, sufficient in quantity to produce a membrane interfering with vision.

Delivery of the lens must be preceded by the breaking of the capsule. This is a simple procedure. Formerly it was thought best to make a small opening into the sac, force the lens out, leaving the capsule in position and breaking it up afterwards. That was a useless procedure, inasmuch as it necessitated the patient undergoing a second operation, and patients were very frequently unable to go to that expense and wait for that length of time. The capsule is now freely lacerated, and there is nothing then to hold back any portion of the lens, so far as the capsule is concerned. After having lacerated the capsule and made the iridectomy, I simply press gently the lower corneo-sclerotic margin, tilt the upper edge of the lens slightly forward, and it comes out with ease. I then remove the speculum from the lids,

let the patient rest a few minutes, and begin the process of dislodging whatever of cortical substance may be left behind. After the operation has been finished in this manner, I go back to antiseptic treatment, using the mercury solution freely, so as to wash the lower lid, and let it come in contact with the eyeball itself. Some of it gets into the anterior chamber, and aids in washing out portions of remaining lens substance.

This treatment is, of course, susceptible to a great many modifications. Operators modify these things according to their own ideas and experience.

A great deal has been said in regard to the bandage used after operating. Shall the patient sit up with the unoperated eye uncovered? The old method has proven a satisfactory one, and while it keeps the patient in bed a little longer, that weighs nothing in the balance when you consider the fact that under any other treatment you are apt to have accidents. The plan is advocated of simply putting an adhesive plaster across the closed lids; but the safest plan is to take a piece of absorbent cotton, moisten it with white vaseline, and fill out the cavity of the orbit above the closed lid, and use the flannel roller bandage, an inch and a half wide, put on in the figure-of-eight position. You can put that on lightly so as to exercise no pressure upon the eyeballs, and the patient can move his head about on the pillow. I would advise those of you who have not had much experience, to see your patient twice a day. Take off the bandage, and with bichloride of mercury bathe the lid on the outside, but do not open the lids unless there is decided inflammation. I keep up that process of twice a day dressing the eye for four or five days, and then lengthen the interval. After the patient has been in bed four to six days I turn one eye loose and keep the other bound until it is ready to be turned loose permanently. That is my mode of after-treatment, so far as the bandage is concerned.

In cases in which there is an irritable condition of the iris, I use a 3 gr. to the ounce solution of atropia. Pull

down the lower lid and drop two or three drops of atropia in the eye, which does away with the danger of iritis. I have had only one case of iritis in the last several hundred cases, and I am disposed to think that the patient produced it himself by an awkward movement of the hand.

My own experience and that of the New York hospitals is, that the operation with iridectomy gives just as good visual results as the operation without iridectomy. I have made most of these operations with iridectomy. The claim for the simple operation without iridectomy is merely that the eye looks more normal and presents a more sightly appearance. We have arrived at such a state of perfection in operating upon cases of cataract that it is seldom indeed that an eye goes wrong after having been operated on. I have the records of 209 consecutive operations of cataract without a single loss, except in the one in bed at present with violent iritis. There has not been a particle of supuration in either one of these cases.

Of the 209 cases, 30 were soft cataracts requiring needling, and 179 are cases of extraction. Antisepsis and cocaine were the chief factors in obtaining the good results above mentioned.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

ART. III.—Treatment of Ophthalmia Neonatorum

By JOHN DUNN, M. D., of Richmond, Va.,

CHIEF OF CLINIC OF THE RICHMOND EYE, EAR AND THROAT INFIRMARY.

CASE X.*—Case of Ophthalmia Neonatorum—Uncomplicated.

Frank E., aged fourteen days, was brought to the Clinic May 4th, 1892; his trouble dates from birth. Examination shows that the eyelids of the child are glued together, so that the child cannot open his eyes, and this although all the matter had been washed from the eyes only a short while before. As the eyelids are pulled apart, a considerable amount of thick pus exudes from between them, and as this is wiped off with a piece of absorbent cotton, more and more pus finds its way to the surface from between the folds of the swollen conjunctiva. There is no ulceration of either cornea in this case.

In these cases, the amount of matter that is to be found under the lids, and the rapidity with which it is formed, are surprising.

Ophthalmia neonatorum occurs in all conditions of society often enough, and so frequently are its effects upon the eye disastrous that a few words in regard to its *treatment* may not be out of place. The following remarks apply to the *treatment of infantile purulent ophthalmia, where there are no complications on the part of the cornea*. These latter cases deserve a separate article.

In Hirschberg's Clinic, three years ago, the routine treatment for uncomplicated cases of ophthalmia neonatorum was nitrate of silver and salt, and their proper use will give results which, so far as I know, can be claimed for no other medicinal agent. The details of this silver-and-salt treatment are of the utmost importance; for without attention to them nitrate of silver will not only do no good, but is capable of producing the very condition it is our object to prevent—ulceration of the cornea. When the discharge is purulent, thick and profuse, twenty grains of nitrate of sil-

* The numbering of these cases refer to the order in which they are being selected for report from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

ver to the ounce of distilled water is the proper strength of the solution; when the discharge becomes muco-purulent, less profuse, and the swollen condition of the conjunctiva, especially in the culs-de-sac, is diminishing, this solution should be made ten grains to the ounce; when the discharge has virtually ceased, and there remains, as evidence of the original trouble, only slight abnormal redness and some swelling of the conjunctiva, five grains to the ounce is sufficient. None of these solutions should be dropped into the eye; none of them should be applied to the conjunctiva beyond the region where the swelling exists; the utmost care should be taken that none of the silver reaches the cornea. Every particle of the solution, whatever be its strength, should, as far as possible, immediately after its application to the conjunctiva, be completely neutralized by a solution of common salt.

The best way to manage the infant is to make the nurse holding it sit directly in front of you, spread a towel across your knees, and rest the child's head in the towel and between your knees. The next point is to turn the child's lids. This is best done by pressing the index finger firmly upon the skin of the lid, at the margin of the orbit, thus forcing the boundaries of the lids into the orbit; and then by moving the finger up or down, as the case may be with the lower or upper lid, the lid becomes completely everted. Then the secretion must be carefully wiped away with absorbent cotton, and this point demands especial care. It is not sufficient to wipe away a part of the secretion; all that is present must be removed. To do this thoroughly, the lids, when the secretion is profuse, should be everted, and then, after as much of the matter as is in sight has been removed, the lids should be allowed to return to their normal position, again everted, and the secretion wiped away, and this should be repeated until no more matter presents itself when the lids are turned.

The next point is the application of the silver, and here great care must be taken to avoid its reaching the cornea. The best way to do this effectually, is to turn both lids at

once, a procedure easy to carry out during the stages when the purulent process is at its height. With a little practice, the superior lid can be everted with the index finger, and the inferior, at the same time, with the thumb. The swollen culs-de-sac thus come together, and the eye-ball is entirely hidden from view, and effectually shut off from the silver solution.

As an applicator, there is none better than cotton wrapped around a common wooden toothpick. This is dipped into the solution, and brushed over the swollen parts of the conjunctiva. The lids must not now be turned loose, but held in position; the everted conjunctiva must be swabbed *carefully* with a second bit of cotton, *wet* with a solution of common salt. A white precipitate is thus formed on the conjunctiva. *The salt solution must be applied until every particle of the chloride of silver is washed away, and we have the clear, clean, red surface of the conjunctiva*, after which the lids may be returned to their normal position. The salt solution should not be too strong. It should be made fresh each time the eyes are to be treated with silver, putting a pinch of salt into half a glass of water.

It is better that the physician should evert the lids, and make the salt and silver applications himself; as it, however, requires some little skill and practice to do this properly, it is often convenient to have a third person to make the applications. Should the conjunctiva show a tendency to bleed after this treatment, then either the silver or the salt is too strong, or too much force has been made use of in the application. This point must be taken into consideration. While the discharge is profuse enough to require the twenty-grain silver solution, the application can be made with advantage twice a day. When the ten-grain solution is to be used, once a day is sufficient; when five-grain, every other day.

In regard to the home treatment of these cases, the silver and salt applications should be made, save under exceptional circumstances, only by a physician and one who ap-

preciates thoroughly their object and limitations. I think that no form of astringents in the shape of "eye drops" should be allowed in these cases.

The mother's treatment of the child should consist *first* in wiping carefully away the secretions as fast as they form in noticeable quantities, and this with absorbent cotton wet with a boracic acid solution; and in the application of cloths wet with the same solution to the lids, the solution to be cool if the infant be a healthy one. There are objections to the use of cold applications in the case of a badly nourished child.

An ointment of iodoform or aristol may be used several times a day, and it will be of especial use when the conjunctiva is much swollen.

Before each application of silver, the cornea should be examined to see if there are any evidences of abrasion or ulceration. Under the treatment described, the average case requires from two to three weeks to be cured; and it rarely happens that there are complications on the part of the cornea, except in those cases where inheritance and earth seem bent on the destruction of the eye.

Occasionally it happens that following this purulent conjunctivitis there supervenes a condition of the conjunctiva which makes it for a time subject to a lighter form of conjunctivitis.

The above case required two weeks' treatment.

ART. IV.—**Lepers and Leprosy, as Seen in the Orient.***

By J. M. FORT, M. D., of Paris, Texas.

Having, during the year 1891, traveled over the lands of Egypt, Syria, Asia Minor, the Black Sea countries of Bulgaria, Roumania, Servia, etc.—that portion of the Orient so well known as the habitat of the devastating disease known as leprosy—I propose, in a brief way, to present this

* Read before the North Texas Medical Association, June, 1892.

subject for your consideration, and, at the same time, to tell you something of the management of this class of unfortunates, as I saw it in those far away countries.

Tacitus, a cotemporary of the Roman Emperor Nero (an Emperor who, in the terrible phrase of Gibbon, "was at once a priest, an atheist, and a god," whose very name is a synonym of all that is base, brutal, and tyrannical), gives us some strange stories about this disease and the Jews. Among other things, he says:—"When the Hebrews were in bondage in the land of the Pharaohs, Bochorus, king of Egypt, inquired of the god, Jupiter Ammon, how his kingdom could be freed from the curse of leprosy? The god informed him that it could only be accomplished by expelling the whole multitude of Jews," whom the gods detested. He accounts for the rejection of swine's flesh as an article of diet by the Jews on account of a fable, to the effect that the infection (or germs) of this malady were first introduced into the human system by eating the flesh of this animal. In the absence of knowledge as to the primary origin of this germ, possibly there may be more truth in this theory than might be supposed at first thought.

I remember having seen but few, if any, cases of this Oriental disease in the land of Egypt, notwithstanding it is regarded as the land of its origin. I was somewhat surprised at this when I ascertained that three-fourths, if not four-fifths, of the population of that fertile valley was composed of Ishmaelites and Israelites.

The Ishmaelites are unquestionably descendants of Abraham through Ishmael, the son of Hagar, the bondwoman, and practice some of the national rites peculiar to his descendants—rite of circumcision, for instance. Besides these, however, there is quite a large element of Israelites or Jews, especially in the cities of that country.

We learn much from an old and the most complete and reliable book of Jewish history extant—a history which gives a connected story of this peculiar and interesting people reaching back to the time when the Lord told Abraham, the progenitor of the race, "to leave the country of Meso-

potamia, where he was at that time living with Terah, his father, and to get away from his father's house and his kindred unto a land which he would show him." This history, however, which, according to biblical chronology, reaches back two thousand years before the Christian era, does not give any data as to when this disease first made its appearance among this people. Nor do we know for certain that they were afflicted with it during their sojourn of 430 years in the land of Egypt. I think, however, that it is legitimate to conclude that they were so afflicted, for we have a wonderfully distinct and accurate account of the disease and its management in the law given the Jews by Moses, their great leader before his death (which occurred on Pisgah, the summit of Mount Nebo, which rises above its fellows on the eastern shore of the Dead Sea, in the old land of Moab), just before they were led across the Jordan into the Promised Land by Joshua, his successor.

Let me call your attention to some of the statements made by this Hebrew law-giver 1450 years before the Christian era in regard to the diagnosis and treatment of this Oriental malady.

It is evident that Moses regarded in it an infection and contagious element which acted as a specific cause in its production. The seeds or disease-producing germs of this malady, as in all specific diseases true to a fixed law of reproduction—*i. e.*, that "like begets like"—produced, when taken into the system, its own peculiar train of symptoms. But unlike itself at the present day—and, so far as I have knowledge, unlike all other specific diseases—the infection appeared in circumscribed spots and streaks on the garments, bedding, etc., visible to the unaided eye. These infected spots were apparent upon the garments, either woolen or linen or skins, and even upon the plastered or stone walls of infected buildings.

Particular directions were given the officiating priests how to manage these patients, and also how to destroy the germs of the disease when found in the garments, bedding, etc., and what course to pursue in order to cleanse the in-

fectured houses. Moses did not have to instruct his followers in the process of "germ culture," nor in the use of the microscope.

It may be said by some reader of this article "that no such thing as magnifying glasses or microscopes were manufactured at that remote period of the world's history." This, however, would be but a prematurely expressed opinion or an unwarranted assumption. For we now know that the ancient Egyptians not only had magnifying glasses, but that they knew how to make them and how to use them. Recent finds and excavations in this land of revelations have rescued from their rocky prisons specimens of glass work which could not have been manufactured without the use of very powerful magnifying glasses. The beauty and delicacy of some of these specimens can only be seen, appreciated and admired when viewed through glasses of high power. Some of this glass work has been examined by the best Venetian glass manufacturers of the present time, and they are free to confess that it surpasses anything known to them, nor can it, they say, be duplicated by any workmen or artist living at the present time. Many of these specimens of this "lost art" have lain buried in mummy shafts or the mastabas of the Queens of Egypt who have lived, reigned and been royally buried hundreds, if not thousands, of years before Moses was born.

The objector must remember that the history of Egypt which, like the law given Moses amid the thunderings and lightnings of Sinai, is engraven upon imperishable stone, and from it we learn that the ancient Egyptians were the most refined, cultivated and enlightened people then upon the earth.

We must also remember that it is more than probable that Moses and King Rameses II, the great Sesostri of history, went to school together at Heliopolis (City of the Sun). You remember that the old hypocritical murderer, Seti I—he who commanded all the male Hebrew children to be put to death simply because they were born—was the father of

Rameses II and also of Thurmuthis, the daughter who found the infant Moses "when she came down to wash herself at the river."

The mother of Moses, when she could no longer hide her cooing boy in her humble home, "took for him an ark of bulrushes," and with a bleeding heart, streaming eyes, and trembling hands, "she daubed it with slime and pitch, and put the child (Moses in Egyptian means 'the child') therein, and she laid it in the flags by the river's brink."

We are told that Moses was learned in all the wisdom of the Egyptians, and we know that there was at Heliopolis at that time—and long prior to that time—an institution fully equipped with all necessary educational facilities, which continued in existence even down to the days of Galen.

It was here Plato studied philosophy; it was here Herodotus, the father of historians, composed at least a part of his wonderful history; here Eudarus learned astronomy, which in after years he so-successfully taught at Athens. Many other distinguished and noted characters were educated at this institution. So it will not do to say that this learned man Moses was not familiar with the use of this wonderful instrument—the microscope.

All that remains of Heliopolis, where this grand old university stood, and where once stood one of the grandest temples in all that land of temples—a temple which was surpassed in magnitude, beauty and magnificence only, perhaps, by the great temple of Karnak at Thebes and the temple of Ptah at Memphis, are only the foundation walls of the old temple and one lonely obelisk—the oldest obelisk now known—the "father of obelisks."

It was at this temple the Apis bull, light-colored lions, a white sow, the hawk, the cat and the phoenix bird were revered and regarded as sacred to Ra (the mid-day sun-god), and were in some way associated with the worship of this celebrated temple—a worship, perhaps, the most imposing and magnificent in all Egypt.

As before stated, all that remains of this old grand Egyptian temple are the foundation walls and this oldest

obelisk now known. The hieroglyphic writings, which are the same on all four of its sides, were chiseled in the stone to the depth of an inch or more, and then filled with metal and polished to extreme brightness, to catch and reflect the new-born rays of the rising sun (Horus) and the last rays of the setting sun (Tum).

This writing reads as follows: "I, Usertesen I, King of Upper and Lower Egypt—lord of the diadems and son of the sun whom the spirits of Heliopolis love, etc., founded this obelisk on the first day of set celebrated at the close of thirty years, etc." Usertesen was the second king of the twelfth dynasty who, according to Mariette, reigned about 2800 years before the Christian era. This old monument of the past centuries was at one time one of a group which stood in front of the temple here in the land of Goshen, but, like the host of Israelites who once lived in this fertile valley, have scattered now—one in Constantinople, one in Paris, one in London, two in Rome, and one in New York.

When I stood near this old granite shaft I realized that it was reared upon the pedestal upon which it now stands before Abraham was born, and that that grand old patriarch had often stood and looked upon it as I was then doing. I realized that Joseph, the rejected of his brethren, had played around it when a youth, and that old Jacob, the progenitor of the twelve tribes of Israel, when he and his sixty-six brethren reached the land of plenty, had stopped and looked, and admired that monument as I was then doing. I knew that Moses, the great law-giver and physician of Israel, and Aaron, the high priest of the host, all had stood near where I stood and admired its beauty, its symmetrical proportions, the skill and beauty of its architecture just as I was then doing.

While this may interest my readers, it is not telling them what I saw and learned about the management of the lepers in the Orient at the present time.

In the account given us of leprosy by Moses, we are told that the priest had but to examine by ocular inspection the garments of the afflicted to find in the "warp or the woop"

of the "woolen or linen garments," or on their skin garments, or on their bedding, *greenish* or *reddish* spots, to learn that it was "a plague of leprosy." When the priest found these greenish or reddish spots he was ordered to put the garments away for seven days, and then to examine them again; and if he found, after the expiration of seven days, that the spots had spread, he might know what kind of a leprosy he had to deal with—"for it is a fretting leprosy." If after thorough washing (whether these garments were boiled or not the writer does not inform us; the presumption is that they were not) the germs continued to spread, the garments were ordered to be burned. If the infection ceased to spread, the infected spots were cut out and burned and the garments pronounced clean.

We are further told that the infection showed itself upon the plastered or stone walls on the interior of buildings in *hollow streaks* of a *greenish* or *reddish* appearance. How these depressions were brought about I am unable even to conjecture.

The writer describes several varieties of this disease. When the Lord told Moses to put his hand in his bosom, he did so; then he commanded him to take it out, and he did so; and "behold his hand was leprous as snow." Again, "when a man shall have in the skin of his flesh a rising, a scab or bright spot, he shall be carried to the priest, and if he find the *hair* in the plague is turned white, and the plague spot deeper than the surrounding surface, it is a plague of leprosy, etc." If the reader will turn to the thirteenth chapter of Leviticus, he will find a wonderfully full and accurate account of this old malady. Moses gives directions for the management of these cases. First, the patient must be separated and quarantined; the infectious garments must be cleaned or destroyed by fire. The infected house must not be occupied until the infectious spots have been removed, and the germs destroyed by scraping the walls, replastering, or, if necessary, the infected stone must be taken out of the wall and new stone inserted in their stead.

This disease was regarded by the ancient Jews as a special curse or direct manifestation of God's displeasure with the afflicted, and in some instances it evidently was. Their means of cure, therefore, consisted in making certain sacrificial offerings to the Lord through the medium of the priests as a means of propitiation, or, as it was called, "cleanse offerings."

We learn from all this that leprosy at that remote period was considered as a disease originating from, and as being propagated by, a *materies morbi*; and that this infectious matter, germs or micro-organism, increased by multiplication so rapidly and to such an extent that its presence and locality in garments, bedding, and even on stone walls could be detected by the unaided eye; and further, that these ancient people used the most reliable agents now known to the profession to prevent its spread among the people, namely, isolation, washings or thorough asepsis, and destruction of infected material by fire.

It is accorded modern microscopists the credit of demonstrating the germ origin of many now recognized specific diseases; but I ask you to put side by side with this claim the account given of leprosy by Moses, and determine for yourselves whether the germ theory of certain diseases be of modern or ancient origin.

When the King of Damascus wrote a letter to Jehoram, King of Israel, requesting him to cure Naaman of his leprosy, "Jehoram rent his clothes, and said, 'Am I a God to kill and make alive, that this man doth send unto me to recover a man of his leprosy?'" Leprosy was regarded as incurable by the ancient Jews, and it is so regarded by the professional world of to-day.

When, on the morning of the 13th of May of last year, I landed and passed through one of those red-taped nuisances—the "Custom House"—I wended and elbowed my way along the crooked, filthy streets of the old, old city of Joppa, in search of the site of the former residence of Simon, the tanner. This was no pleasant undertaking, for the streets were thronged with old Arab men in baggy

trowsers, old hags of women, sore eyed, red-headed Jews, half-nude, filthy children, over-burdened, sorrowful-looking donkeys, camels with hanging lips and tearful eyes, and last, but not least, mangy-looking cur dogs. I felt the enthusiasm and romance of foreign travel oozing out of me at every pore.

Having found and gone on the house-top, as Brother Peter did, of the Latin Hospice, which occupies the locality which tradition, since the sixteenth century, says was occupied by Simon's house, I set out with renewed courage to find the site of the house where lived, in the first Christian century, that industrious, charitable old maid, Tabitha (Dorcas), so highly spoken of in the Acts of the Apostles. It is related that this worthy lady was taken seriously ill, and her friends, becoming alarmed, sent out to Lydda, fourteen miles out on the plain of Sharon, for Peter to come to see her; but the good soul was dead, and had been washed and laid out, when Peter reached the house. The Apostle was not discouraged by this result of the case, however, but went to work, and by dint of earnest, faithful prayer, prevailed upon the Lord to raise her to life again, giving us the only instance of such a blessing ever being bestowed upon an "old maid."

Leaving Joppa in the afternoon, I went out to Ramleth, which occupies the site of Arimathœa, the old name of Joseph. As we neared this town, I came face to face with this wretched disease. Crouched by the road-side were twenty or more parts of Arab men and women—poor, pitiful lepers. Some were blind, others had no nose, in others the fingers or hands, and even arms and feet, had been amputated by this dreadful malady. Coming up through their palateless throats could be heard harsh, unnatural, guttural sounds, giving expression to their piteous cries of "buckshee" (give me something).

As in the olden times, these poor, afflicted, destitute people are driven without the city walls of the towns and cities in the Orient. Impelled by hunger and want, they

gather by the wayside of the thoroughfares to excite the sympathies and receive a pittance from every passing stranger. The natives turn a deaf ear to their piteous cries, and shun them as though they were so many vipers.

To see and hear these wretched creatures for the first time is enough to shock the sensibilities and arouse the sympathies of any man or woman who carries a heart within his or her breast.

At nightfall, these lepers seek shelter from the heavy dews and chilling winds of night by crawling into the bare walls of quarters prepared for them in the suburbs of the cities and larger towns, or repair to some neighboring cave, or find shelter within the sepulchral walls of mastabas (burial houses).

In Jerusalem and Damascus, the Government of Turkey has provided the lepers with what are called "Lepers' Hospitals." These comprise house-room, sheepskin or straw palates, a scant supply of coarse food, and medical attendance. After going into the hospital at Damascus, I came to the conclusion that the hospital and medical attendant were such in name only. No provision is made for this class of patients, only so long as they remain in the hospital; and notwithstanding these people believe the disease to be contagious, they throw no quarantine restraints around the lepers, other than prohibiting them from entering within the city walls.

Another strange feature in the management of this class of people in the Orient, is the privilege allowed them of marrying and intermarrying and living in concubinage. It is an admitted fact, and one recognized in the Orient, that leprosy is in the main propagated and kept alive by heredity, and yet no restraints are thrown around them in this particular.

I learned that the offspring of a leper may be a fine, healthy-looking child, and remain so an indefinite length of time, the disease usually manifesting itself between the age of puberty and manhood or womanhood. I saw no case of the disease in the child or youth. Girls marry in

that country at ten and twelve years of age; consequently, an Arab gentleman may ignorantly add a wife or concubine to his harem in whose systems are the seeds or germs of this devastating disease.

These Arabs are a marrying people. They have no laws pertaining to marriage and divorce, other than those set forth by Mohammed in the Koran, which allows every man to be the happy owner of four wives at a time. These form the nucleus or nidus of a harem, to which he may add as many concubines as fancy, inclination, or ability to maintain, may dictate. Aside from the article of proveni-der for his harem (which includes the lord's wives and donkeys), these harems are not expensive institutions, for, in the main, the wardrobe of the ladies consist of a loose cotton gown, and old shawl—worn over the head—and the veil; the last regarded as the most important, as it screens their comely faces from the impertinent gaze of the infidel dog of a Christian.

The Sultan, who stands at the head of church and state, and whose word is the supreme law of the land in all cases where it does not conflict with the Koran, sets his people a generous and noteworthy example of appreciation of the sex by correlling in his magnificent palace, at Constantinople, 404 of these ministering angels. If a woman was designed by the good Allah to contribute to man's happiness "in this low ground of sorrow," the Sultan ought to be an exceedingly happy man.

In Egypt, and throughout Palestine and Syria, the great bulk of the people are very poor, and the cry of Buckshee! Buckshee! rings in one's ears from morning till night.

In addition to living in extreme want and indescribable suffering, the poor lepers are treated and regarded as outcasts in every sense of the word—they are ostracized, shunned, despised, and pronounced and regarded as unclean and beneath the brute. I am justified in saying this, for in Jerusalem, with a population of 24,000, in Damascus, with its 110,000 population, and Constantinople, with a

population of something like 2,000,000, you will find not less than twenty-five or thirty thousand mangy cur dogs, who are secured in peculiar and special privileges. They roam over these cities at will, eat and sleep when and where they choose, and no one dare to molest or make them afraid. I have often seen them spread out full length in the middle of the narrow, crowded streets, taking their noonday nap, and see men, women, camels, donkeys, and even the proud European, accord them the undisturbed privilege, by walking around or stepping over them. To strike or injure one of these privileged characters, subjects the aggressor to fine and imprisonment. In Constantinople—the heaven of the Turk and dog—and in Damascus, if one these pets of society gets sick or wounded, it is sent to a Canine Hospital, cared for and treated, until it dies or recovers. If it dies, it is given a decent interment; if it recovers, it is returned to the street and ward where it resides, to renew its midnight howls. I suppose this love of the dog and hatred of the leper is a matter of taste or fancy. We learn that the dog forms a large element of the population of Chinese cities, but then we must remember that the Chinese fattens his dog and eats him; this, too, is a matter of *taste*. The Turk, however, does not eat dog-meat, nor do they compel them to make an honest living by work, as do the Austrians. We find no variety among the dogs of the East. You cannot find a St. Bernard, a pointer, a setter, skye colley terrier—no, not even the sterile wife's substitute for *baby*; I mean the detestable poodle.

But, Mr. President, I have trespassed to too great length upon your space already, so will bring this article to a close. In my forthcoming book I deal at greater length with this and kindred subjects.

In a case of acute neuralgic headache, I used Peacock's Bromides with complete success, and find it the best nerve sedative prepared.—F. F. HENWOOD, M. D., Thompson, Pa.

ART. V.—**Special Counter Irritant Areas of the Head.**

By HENRY V. GRAY, M. D., of Roanoke, Va.

There is scarcely an earnest, thoughtful member of our profession who has not seriously considered and conservatively measured the propriety of calling to his aid the value of blisters, setons, pustulations, and other counter-irritant means in their battles with disease, particularly with young children and delicate females. None of us doubt their essential value in many morbid states of the system, but we fail signally in defining the value of special counter irritant areas or regions of the body, which yield better results than others.

We claim that nature never afflicts us with a malady she is not able to subdue, and that she places resources and areas at our disposal, if we are possessed with the requisite power of intelligence, to appropriate and safely define and use them. These areas are so located we cannot fail to comprehend their purport.

This subject is of deep interest to us, and the humble writer expresses the hope that this is but the genesis of much thought and experiment by those great lights among us who have so generously and unselfishly given to us so many good things in the past. These areas are used to initiate a salutary influence upon the blood and nervous systems, encourage tissue metamorphosis and substitution, and restore healthy nutrition. I shall call your attention especially to *Head Areas*.

1st. *The Occipital Protuberance Area*.—The outer surface of the occipital bone is convex, and has a peculiar heap of osseous tissue, called a *protuberance*. It is not put there by mere chance, and is of interest when we scrutinize its anatomical arrangement. This heap of bone has pile upon pile of Haversian canals, spaces, lacunæ and bone cells, establishing a practical area, and becoming a fit associate to the nutrient vessels and nerves. In nearing this bump or protuberance, the educated eye observes its sensitive rough-

ness and porosity, and having before witnessed that the apices of the spinous processes of the cervical vertebræ have the same nature, should readily associate in their minds this area as one of great value to the physician. The ligamentum nuchæ (paxwax of animals) has its origin and insertion within this area. This ligament is spoken of just here to remind us that we shall dilate more fully upon it when that part of our work is reached.

The inner surface of the occipital bone is concave opposite this protuberance, and divided into four fossæ by two crucial ridges of bone, which at their intersection forms the "*internal occipital protuberance*." These fossæ lodge the two posterior cerebral and cerebellar lobes. The superior arm of this ridge is deeply grooved for the superior longitudinal sinus. The occipital sinus arm runs downward to the great foramen—*foramen magnum*—through which pass the medulla oblongata and its membranes, the spinal accessory nerves and the vertebral arteries. This protuberance area is of much importance, and embraces the entire area of the occipital bone to the *foramen magnum*.

We have told you what was lodged in the four occipital fossæ, and what passed through the great foramen. We will now go on to speak of other necessary parts. It is a centre (through the medulla oblongata) of co-ordination and harmony of muscular action, and of sensory impressions. Most of the cranial nerves are partly located within the influence of this protuberance, having their origin near by the floor of the fourth ventricle, at the base of the brain, particularly the second or optic, eighth or auditory, tenth or pneumogastric nerves, and eleventh or spinal accessory.

CASE I.—During the construction of the Shenandoah Valley Railroad, I had charge, as physician, of ten miles of the road, under Dillon, Jolliffe and Carpenter. I was called to see one of the men at Martin's Camp in the fall of 1884. The camp was on the extreme end of the line. Upon my arrival, I found that I had a serious, and probably fatal, case. The man had been sick for two or three days, and in his delirium went out at night from the *shack*, and was not seen again for twenty-four hours, when he was found in a

cluster of bushes, insensible, stiff, and apparently lifeless. He was rigid, and presented every indication of a hopeless case. I had his hair shaved off, and applied some setons—one over the protuberance, deeply inserted, and one on each side (lower) between mastoid bone and insertion of trapezii muscles. I rubbed croton oil well into these points and over the tips of the spinous processes of the cervical vertebræ. I was sent for some twenty-four hours afterwards to relieve him of the pain. I did not see him for two days, when I found my patient much better, but occupying himself with the terrible pustulation and counter-irritation brought about by the setons and oil. My belief was that he got well by the vigorous attack upon this area, breaking up morbidity.

CASE II.—I was called during the summer of 1886 to see a child of Mrs. Stanard, in this city, who was suffering from cerebro-spinal meningitis. I did all I could to relieve the child. Finding everything hopeless, I requested that I might put on a large, old-fashioned blister over the whole head. The mother objected, but permitted me to take two silk stitches (setons, as I called them) in the integument of the occipital protuberance area, and to rub a little oil (croton) upon the thread. I did so and left, telling the mother, if the child was living to let me know. I was sent for next morning to see one of the sorest heads I ever saw, but it saved the child by acting deeply and well.

I find setons act with much greater vigor when croton oil is used upon the material. Of course, you would never use any such harsh measures save in almost moribund cases.

2d. *Parietal Foramen Area*.—Instead of searching through a long and tedious labyrinth of literature upon this foramen, I shall not hesitate to appropriate special points from the contribution of Dr. W. M. Barton, of Washington, D. C., upon the "Parietal Foramen," and which appeared in the April number, 1892, of the *Virginia Medical Monthly*. He has studied well and observed closely this foramen as an anatomical point, and like all active workers in the field of medicine, is doubtless glad when he has rendered assistance to a co-worker.

This foramen, the Doctor states, "was absent on both sides

in seventeen skulls out of one hundred and twenty-five, which he carefully examined, and that it was present on both sides in forty-eight, present on right side only in thirty-seven, present on left side only in twenty-three." Its location was variable, but always near the same point. "At the back part of the superior border, close to the sagittal suture, is a small foramen, which transmits a vein to the superior longitudinal sinus, and sometimes a small branch of the occipital artery."—(Gray.)

These observations are of value. The entire absence of this foramen on both sides, in a number of instances would very naturally suggest an enquiry, What was the mental and physical status of these cases, and the amount and color of the hair? Whether audition and olfaction were unfavorably impressed? These are pertinent and proper questions, as the longitudinal sinus receives a vein and artery through this foramen, but of its value as a counter-irritant area we more especially speak.

3d. *Mastoid Foramen and Cell Area*.—This area is situated behind the ear, upon each side, and is one of the divisions of the temporal bone. "Its outer surface is rough, and perforated by numerous small foramina, one of which is of large size, and is termed the mastoid foramen. It transmits a vein to the lateral sinus." The inner surface of this division forms a part of the posterior fossa of the base of the skull, and is deeply grooved for the lateral sinus. The tip of the mastoid portion is called the mastoid process. It should not be mistaken (the tip or process) for the main portion, as it gives attachment to the sterno-mastoid, the splenius capitis, and the trachelo mastoid, and should be prudently considered before applying setons and blisters.

The two latter counter-irritant areas—parietal and mastoid—are considered and studied with the object of more profoundly influencing the grave and intractable diseases of the basilar region, and the ear and eye; we likewise use the occipital protuberance area.

We have already spoken of the location of the optic,

auditory and pneumogastric nerves at the base of the brain. We might naturally infer the value of this trio of areas when intelligently brought to our aid.

You have witnessed hundreds of times the application of the seton in serious diseases of the eye (caused by optic neuritis), when under treatment by our distinguished oculists. Did you ever ask them or yourself why they applied setons to the temples almost exclusively, or why they selected that point? There is no foramen in the adult in the squamous portion of the temporal bones. All are consolidated, and the connection with optic nerve troubles by means of setons in the temples is very feeble. Haven't you observed (candidly speaking) more harm than good? The oculist did not consider the great draught required to impress *post-orbital disease*. The diseases of the external and internal ear might likewise be considered as having been neglected, because sufficient reflection had not been used in locating these areas.

In optic nerve troubles, apply your setons near these important therapeutic areas, if you wish earnestly to cure, and you have fulfilled well your part. You have influenced the longitudinal and lateral sinus circulation through the parietal foramen area, and the entire visceral contents within the boundaries of the other two areas. If you apply your setons properly, you will impress the entire intracranial circulation, setting up healthy nutrition in the deepest basil centres. Nothing so overcomes malnutrition and hypertrophic seats and conditions as deep setons within these areas.

In troubles of the ear, apply your setons and blisters to the occipital protuberance and mastoid areas. These cells and foramen you might very properly suppose would do good in diseases of ear, when properly impressed with counter-irritants. The glued up, consolidated mastoid cells, which contain residual air in normal audition, will become reconciled to the resolving and alterative influence, and thus set up another lease of life. The occipital protuber-

ance area can be acted upon even in diseases located in other parts of the system.

In conclusion I will invite your attention to some *peculiarity in origin of the olfactory nerve*, differing widely from other cranial nerves. The first, or olfactory, is the only one located in the cerebrum, anterior lobe. The others take root in and around the base of the brain, and can be promptly influenced by deep setons and oil, applied within the occipital protuberance area.

In the early part of this contribution, I spoke about the *ligamentum nuchæ*. This ligament is the *paxwax* in animals and forest beasts. It gives strength and grace to them, as you have observed in the blooded horse, and deer of the forest.

In cerebro spinal troubles, this ligament, together with the trapezii muscles, become stiff and rigid; or entirely wasted and relaxed. It has a reflex of great importance, and should engage your attention—*nuchal reflex*,—and should be your guide in using setons. In fact, I can call this ligament *a pump of energy* to the human system. If you will take the trouble to examine a number of people as to its action, you will agree with me. In some persons, you will observe a deep sulcus at back of neck, called, in rustic lore, the kitchen, especially in females. It indicates ill health and much exhaustion. You will observe in another person, that this ligament, as well as its associates, the trapezii muscles, stand up and out, even when the head is quiet, and indicates high tension, verging on exhaustion, if pushed much farther.

Again, there is a stiffness and mucine rigidity, not yielding to relaxation, even in sleep, and indicates cerebral, basilar, or cerebro-spinal disease—the parts being all glued together. Again, this ligament, together with all the muscles in that region, have fallen in, indicating a chronicity of conduct and waste, which calls loudly and pitiably for relief. The *nuchal reflex* is absent, and possibly entirely exhausted in this latter state; still do not fail to give your

patient his only hope, and apply your setons and croton oil to the areas.

In a recent contribution to the *Philadelphia Medical Bulletin*, I speak of the *nuchal reflex*, as the *star reflex*, defined in our boyhood days, as "seeing stars in daylight, and produced by striking back of neck with open hand. I did not however, give that significance to it which I do now, nor measure it as a diagnostic factor.

My attention was painfully arrested very recently by a crowd of mischievous boys playing this prank upon a companion. The little fellow innocently permitted the boys to strike him back of his neck, with their open hands, to see the "stars in daylight." He was the sickest little fellow, for a short time, I ever saw. His vertiginous, dizzy displays were very active, and in falling, from this concussion, he vomited freely, thereby bringing about a healthy and prompt reaction.

ART. VI.—Preservation of the Perineum.

By EDWIN P. TURNER, M. D., of Richmond, Va.

In the discussion to-night it is not my intention to go into the details of causation of ruptures of the perineum, nor to enumerate the many plans of treatment advocated by various authors; but more to bring to the attention of this body a plan for the prevention of this accident, which I have of late adopted. On my part, it was the outcome of necessity. Appreciating that a clean cut heals more kindly and readily than a ragged tear, especially in a favorable position, I was induced in the emergency to carry an idea into practical application—a procedure I have had no reason to regret; for it certainly has, in more than one instance, served me well. We are fully aware of the all-importance of an intact perineum for the preservation and continuance of a healthy condition of the pelvic and geni-

tal organs of woman. Appreciating this fact as we do, it should be our duty to use every means available and practicable that tends to the welfare of our patients.

The majority of cases, especially multipara, with little attention, generally terminate favorably as far as the perineum is concerned. Of course, it is our duty in every case of accouchement, no matter how simple, to give sufficient attention to this important part, if for nothing more than to have a clear conscience of duty well performed. Other cases, where the parts are more rigid and unyielding, will require more skill and attention. Sometimes, after hard and faithful work, our patient is delivered safely. Then, again, it may be our misfortune that she is torn to a degree ranging from a ruptured fourchette to the destruction of the entire perineal floor.

We have all been taught how the presenting part should be pressed back during a pain, especially when there is danger of rupture, so that the perineum shall have time to gradually stretch and dilate; that we should tend to shove the perineum forward—the perineum resting in the hollow of our hand, while the extended thumb rests upon one side of the vulva and fingers on the other—so that it shall be stretched over the presenting part, thereby helping it to dilate; also that it is preferable when the perineum is fully dilated to bring the presenting part forward between the pains and deliver them if possible. There are other plans that I might enumerate. It is well to remember that in vertex presentations it is not always the head, but often the after-coming shoulders, which give you trouble. We should guard the parts with care until after the shoulders are delivered.

It is when every method has been tried, and we feel that rupture is imminent, that I would suggest to take either a sharp pair of blunt-pointed scissors, or a blunt-pointed bistoury or hernia knife, and nick on both sides that part of the labia which is most severely stretched, midway between the pubis and the perineum, cutting outward from one-half to one inch. Before the cutting, the labia is stretched over

the presenting part—a thin, web-like membrane, fitting it like a glove. It is not so readily lacerated as the perineum. After the incision it retracts. We have a larger and more commodious vulvar outlet; the child is born, the perineum saved, and no important parts have been injured. Instead of having a tendency to separate, as does a perineal tear, at every movement of the patient, the severed edges come at once into apposition—seldom needing a stitch, readily healing, leaving the parts in a normal condition, the position of the wounds render them but little liable to septic absorption and infection.

I have treated four cases, all primiparæ, by the above method, with the very best possible result, and am confident had I pursued a different course, badly lacerated perinei, and the bugbear and trouble which attend them, would have been my lot. As it is, all four of my patients are enjoying perfect health as far as the perineum and the organs dependent upon it for support are concerned. I throw out this suggestion with the hope that it may help some of you in time of need, and render as faithful service as it has me.

ART. VII.—**Laparo-Hysterotomy versus Craniotomy, Embryotomy, etc.—With Report of a Case of Pelvic Contraction in which the Mother and Child were Both Saved by a Timely Resort to Laparo-Hysterotomy.***

By CORNELIUS KOLLOCK, A. M., M. D., of Cheraw, S. C.

On the 20th of March, 1892, I was called to Mrs. A. C. L., aged 28 years. General health had always been apparently good. The patient, however, had a severe pelvic contraction, which must have been consequent upon some diseased condition of the bony structure of the pelvis. This was the third time this woman had been pregnant. Her first labor was on the 7th of September, 1885; the second on the 12th of July, 1887; and the third on the 20th of March, 1892. In the first and second labors, the attending physicians,

*Read before the North Texas Medical Association, at Sherman, Texas, June 22d, 1892.

finding the pelvic contraction so great that they could not effect a delivery of the fœtus after craniotomy, were compelled to resort to embryotomy. In both the first and second accouchements, the parts were greatly mangled and lacerated. After the second labor, the patient came near losing her life.

In a thorough examination by the touch and with the pelvimeter, I found the two conjugate diameters to measure a fraction less than one inch and a quarter. I declined to attempt embryotomy, for I felt assured that in the small space in which the work must be done, the soft parts, perhaps including the bladder and intestines, must be so mangled and lacerated as to endanger the life of the patient, as much if not more than if the operation of hysterotomy was performed. The attending physicians thought the contraction in the third accouchement was greater than in the first and second.

When hysterotomy was proposed, the patient and her husband readily consented. The woman was in a good condition to undergo a severe operation. She had been in labor less than six hours, and the contractions of the uterus had not been very strong, and there had been no manipulation of the parts. The bowels had been emptied twice in the last twenty-four hours and the water was drawn with a catheter. Every aseptic and antiseptic suggestion was fully carried out about the patient's person, about her bed, and also about the persons of those who assisted in the operation. The vagina was washed with a disinfectant fluid, and the abdomen thoroughly cleansed with hot water and soap, and then freely bathed with a solution of bichloride of mercury 1:2000.

Sanger's method, known as the new and improved Cæsaræan section, was the one decided upon in this case. An incision of seven inches was made in the median line below the umbilicus. This brought the uterus in view. To protect the abdominal cavity, the cervix was surrounded with a thin sheet of India rubber, moistened with a four per cent. solution of carbolic acid; the cervix was also constricted with Esmarch's elastic tube. To open the cavity of the uterus a vertical incision of six inches was made in its anterior wall about its middle third, in order to avoid the fundus and cervix. The membranes were now ruptured and the child was brought out by the feet, the head being low down in the cavity. It is somewhat remarkable that the child was not asphyxiated; it cried vigorously as soon

as atmospheric air reached it. When the uterus was contracted, the tube was removed and the ruptured arteries were secured.

The incision in the uterus was now closed by twenty interrupted sutures, twelve deep and eight superficial. The sutures were introduced so as to include the peritoneal and muscular coats, avoiding the mucous. They were applied in the manner of Lambert's intestinal suture so as to welt in the peritoneum, thus securing a speedy union by maintaining the serous surfaces in contact. These sutures in the uterus were all of carbolized silk. The catgut is not to be depended on, for when they become moist they stretch, and sometimes the knots become untied. The whole abdominal cavity was now thoroughly washed out with hot sterilized water. No drainage was used, as there could be no leakage after the thorough closure of the incision in the uterine walls. The external incision in the abdominal walls was closed by silver wire sutures.

Feeling it to be a duty to this brave woman to save her from the suffering and the risk of her own life that must attend upon another pregnancy, and knowing that the removal of the ovaries would not lessen her chances of recovery, I did Battey's operation. The ovaries were in a perfectly healthy condition, and would probably, sooner or later, cause another conception.

I do not remember an operation of as much magnitude as this that did better. The temperature was never higher than 99.5° F., and the pulse never above 90.

Since the recent advance in gynæcology and in abdominal surgery, the question arises, Are we always justified in ending a difficult and protracted labor by resorting to embryotomy or craniotomy? These operations always cause the death of the child and sometimes prove fatal to the mother. The moral question is often tided over by physicians when they say they did not resort to craniotomy till they were satisfied the foetus was dead. But this is rather dodging the question. They, as it were, let the foetus die when there was a possibility of saving it, in order that they may be able to say they did not kill it.

Both embryotomy and craniotomy are often fatal to the mother; for the contusions and lacerations of the vagina and adjacent tissues, particularly when the pelvic contrac-

tion is very great, are often frightful. The actual mortality in these operations is very great. This, we must admit, is in a measure due to the condition of the patient when the operation is done. As a general rule, they are done as a last resort, after a long and painful labor, when the patient's strength is exhausted or the parts more or less contused by repeated efforts to turn the fœtus or to deliver with forceps. It must also be borne in mind that exhaustion of the system favors attack of peritonitis and crural phlebitis; sepsis has also much to do with these sequelæ.

Then let every physician bear in mind the momentous fact that in every case of labor there are two lives at stake, and that it is his duty to save both, if possible. When there is reason to suspect the presence of a pelvic obstruction, let there be a careful and thorough exploration of the pelvic region, and ascertain by the touch and pelvimeter the nature and extent of the obstruction—not by experimental trials with forceps and attempts at turning.

Finding the pelvic contraction to be so great that the delivery of a living child is utterly impossible, what is the duty of the attending physician? To wait till the fœtus dies, and, after the woman's strength is exhausted, mutilate her by doing embryotomy or craniotomy, thus endangering her life? We cannot conscientiously accept this position. In some cases the pelvic obstruction is so great that craniotomy cannot be done with safety to the mother. In the case reported in this paper, the conjugate diameter was less than one inch and a quarter, and the uterus was high up. To have attempted craniotomy or embryotomy in this case would have been a criminal act from a knowledge of the first and second labors; either of these operations must surely cause the death of the fœtus, and, in all probability, that of the woman. Only six hours having elapsed since the labor commenced, the woman's strength was not exhausted; and having been spared the long continued action of the uterine muscles, which, as in contusion of the parts, tends to excite peritonitis and prevents union by first inten-

tion, she was in a proper condition to stand laparo-hysterotomy.

Results recently obtained by the improved Cæsarean section are very encouraging. Out of 149 operations on the continent of Europe, 108 women and 136 children have been saved. In Germany, the results are better than in any other country, for there the greatest degree of care has been exercised, and a most rigid adherence to the technique of the operation maintained. Out of eighty operations there were twelve deaths. In eighteen operations in Austria, twelve women and fifteen children were saved. Leopold, of Dresden, in seventeen operations, had three deaths. In twenty-nine operations by Zweifel, there was one death. Schauta has done the Cæsarean operation fifteen times without a single death.

In America, the results of the operations have not been equal to those of our brethren on the Continent across the water. Why any difference in the results of the operation, we are unable to say. The American surgeons have, in both abdominal and pelvic surgery, compared favorably with those of any country. It cannot be that they are less careful or less rigid in their adherence to the technique of the operation. However, in the past three or four years there has been in the United States a great change for the better. In the hospitals the fatality is much less than it was a few years ago. Recently in Louisiana, in eighteen operations, fourteen were saved. In eight operations in Ohio, six were saved. In December, 1891, Dr. Charles Jewett, at the Long Island College Hospital, did Sanger's improved Cæsarean operation twice successfully; saved both mother and children. Dr. Joseph Price, of Philadelphia, one of the most skillful and successful surgeons in this country, has done the Cæsarean operation successfully a number of times. Dr. Price prefers Porro. There are some who prefer this method, while others adopt that known as the Sanger Improved Cæsarean Section.

In estimating the comparative advantages of these opera-

tions, it is difficult to say to which the preference should be accorded. According to the statistics mentioned, the mortality of the Cæsarean section is not greater, if as great, as that of craniotomy and embryotomy. In the latter operations, there is a positive certainty of one death, perhaps two. In the Cæsarean section, if done in time and properly performed, the hope of saving the child is as great as in a natural labor—greater than when the head of the foetus has been impacted for a long time in the pelvic strait and then delivered with forceps. It is my honest conviction that if all cases of pelvic contraction could be attended to in time before the woman's strength is exhausted, and before the contusion and mangling of the tissues have excited a septic influence, 80 or 90 per cent. could be saved.

Every one must admit that the helpless foetus, which is in no way responsible for the position it occupies, surely has some rights, which it is incumbent upon us to consider, and it demands of us some effort for its protection. Then let craniotomy be relegated to the past and its place be taken by a method more humane and more in accord with science. If the advance in gynæcology and surgery continues for another decade as it has in the last twenty years, we may hope that the happy period is near at hand when craniotomy and embryotomy will be done as rarely as the Cæsarean section was thirty years ago. In 149 operations, 108 women and 136 children were saved—a preservation of 244 lives. If craniotomy had been done in these cases, 149 children would have been destroyed and, in all probability, twenty or twenty-five women. In estimating the results of the Cæsarean section in contracted pelvis, no one can deny the fact that the operation is not only justifiable, but is imperatively demanded. As it is our business to save life, how can we reconcile it to our consciences to stand by for hours, perhaps for days, waiting for the death of a helpless foetus, and then subject the mother, in an exhausted condition, to a savage operation, causing her to imperil her own life? Let the "slaughter of the innocents" cease.

Proceedings of Societies, Boards, etc.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

June 21, 1892. Mark W. Peyser, M. D., Reporter, *pro tem*. President, Thomas J. Moore, M. D., in the chair.

Dr. Ed. P. Turner read a paper on the

Management of the Perineum in Labor. [See page 415.]

Dr. George Ben. Johnston said that it is common for the obstetrician to encounter cases in which it appears impossible to save the perineum as it is distended and bulged by the pressure of the down-coming head; and yet, at the last moment, it may relax, and birth be accomplished without injury to the tissues. For this reason the speaker would hesitate to cut the labiæ to avert a rupture that is only *threatened*. If the perineum *does* tear, by rendering the wound aseptic, stitching immediately and keeping the knees tied together, repair will take place in nine out of ten cases. In view of these facts, we are not justified in adopting so severe a preventive measure. Besides, there is as much danger in cutting the labiæ, on account of their greater vascularity, as there is from rupture of the perineum, and the opportunity for absorption and septicæmia proportionally great. It is best to permit nature to take its course and repair any damage that may be done. He has tried supporting the perineum and other methods, but has seen tears when not expected, and *vice versa*.

Dr. Turner, in closing the discussion, re-affirmed his belief in the utility of the operation, and said that he had seen no untoward symptoms from nicking. He would feel that he had neglected an obvious duty if he sat quietly by and permitted nature to take its *destructive* course.

Dr. Turner reported a

Case of Fracture of the Tibia and Fibula.

In six weeks the latter united, but the former did not. He applied a splint, and permitted the patient to walk with the aid of a crutch, and in four weeks there was perfect union.

Uncommon Result of Otitis Media.

Dr. Charles M. Shields saw a man two months ago with the following history and symptoms: Four years previously there had been rupture of the tympanum of the right ear

with escape of pus, resulting in the abolition of the sense of sound on that side. Two months ago, inflammation of the middle ear of the left side occurred, and ran the usual course, the drum rupturing on the evening of the third day with cessation of pain and temporary restoration of hearing. The following morning, however, the deafness returned, and has continued ever since. This is an uncommon outcome of otitis media, as total deafness never occurs. There is no appreciation of sound, even when the bones of the head are used as a conducting medium. Two days after the rupture, chills and fever supervened, supposed at the time to be due to ear trouble, but subsequently thought by Dr. Hugh M. Taylor to be malaria. Neither quinine, phenacetine or aconite seemed to allay the fever, which continued up to ten days ago. There must have been some anomaly in the division between the internal and middle ear, permitting pus to gain access to the labyrinth before being discharged. Dr. Shields does not think cerebral abscesses are ever due to troubles of the internal ear, but they may occur from inflammation of the mastoid.

Dr. W. W. Parker reported his own case—*Indigestion with Heart Trouble*. He called attention to a peculiar intermission of the heart's action characterized by a delay of one-half the usual time between the second and third beats. Assuming the normal intermission between the heart-beats to be one second, the time between every second and third beat in his case would be one second and a half. Attention to diet and calomel (which seems to have a soothing, sedative effect locally on the gastric mucous membrane) at first afforded relief. At the moment digestion of the contents of the stomach is completed, he has to take food, or this peculiar affection of the heart will commence almost immediately. It is attended with great depression, amounting at times to cardialgia. Iron, quinine and strychnia, when persisted in, seem to afford relief.

Meeting, July 5th, 1892.

Cholera.

Mr. Hugh Blair says cholera follows la grippe. Years ago one physician treated it with whiskey, camphor, and opium. Another said opium was of no avail and harmful, as it produces congestion, which trouble is already present. Calomel and ice produce no disturbance, and meet with success. Opium produces death. Calomel was given in large doses, ten grains every hour; but he doesn't think

this is the correct way. In old times everything was given by the stomach, which could not retain anything. The hypodermic syringe now meets with success.

Cholerine, the slight diarrhœa before cholera proper, is stopped by the use of a good "cholera mixture." Later, calomel prevents collapse and saves the patient. Soothing by the hypodermic syringe is the proper plan, the nervous system being aided by this means. The last time cholera came to Richmond it produced very little effect, as the city was thoroughly limed; but in 1832 the epidemic was worse here than anywhere else. The disease originates in India, goes to Russia, thence across Europe, and then the Atlantic. The scientific cause is the comma bacillus.

Dr. Wm. S. Gordon said the best

Treatment for Cholera Infantum or Summer Complaint of Children

Is morphine hypodermically. Dr. Larrabee, of Louisville, pronounces it very successful. It is the only rational treatment, as the stomach retains nothing, and the nervous system bears the brunt of the disease. The disease has the same effect upon infants as cholera morbus has upon adults. The dose of morphia, hypodermically, for cholera infantum should be from 1-300th to 1-150th grain.

Dr. Wm. Matthews, of Manchester, said that Dr. A. Flint, Jr, of New York, used hypodermics with success, in cases of cholera, fifteen years ago. He is uncertain about the dose. Dr. Matthews cleanses the whole bowel, and thinks that colon flushing is a great thing, but is very difficult. He has had a patient for six weeks, the inflammation spreading to the spinal cord, producing fifteen spasms a day. The colon, in the case, cannot be flushed. The catheter passes very easily, but is immediately shot out as if from a gun. In *cholera infantum*, calomel is the sheet anchor. Afterwards he uses intestinal antiseptics, as salol and sulphocarbolate of zinc; then astringents. In the earlier stage, no opium is given, but, in some form, it is demanded on the second or third day. He has met with moderate success. For flushing, borax, or a weak solution of Listerine or chloramine; one-half a pint twice a day is sufficient for a child two months old. He has never tried hypodermics of morphine.

Dr. Wm. S. Gordon said, that, if given to adults, he did not see why morphine should not be given to infants, the trouble in both being a want of vaso-motor control.

Dr. Thos. J. Moore began by saying that the text-books are wanting in descriptions of cholera infantum, *per se*. Brain trouble is often confounded with the other symptoms. The bromides control this as well, if not better than opium, and do not disguise the symptoms. The same organs are involved in it as in cholera morbus, the only difference being a want of nervous development in the infant. The weight of authority is in favor of morphine hypodermically in cholera infantum, the dose being exceedingly minute. He believes it to be proper.

Dr. W. W. Parker said, that he has no doubt that the hypodermic use of morphine for children is very good; the only difficulty being the correct dosage. Collapse of cholera infantum should be treated with friction and stimulants, but no opium. So far as Asiatic cholera is concerned, he has no fear, if he can see the case in its incipency. He gives calomel with capsicum, and sometimes opium. *French brandy* is the best remedy. He believes small doses of opium in *cholerine* to be effective. A drunkard will always die.

Dr. Parker reported the following case of

Dysentery followed by Vocal Paralysis.

A man, weighing 215 pounds, has been suffering from dysentery, preceded by diarrhœa. He was discharged last Sunday. The doctor was sent for the Tuesday following, and found the man almost speechless. He had been asleep for two and a half hours by an open window. Dr. Parker wished to know the cause.

Dr. Mark W. Peyser reported a similar case, occurring in a night watchman while on duty. Speech, in this case, was recovered in a week.

Dr. Parker, continuing his own case of *Indigestion with Heart Trouble*, reported at the last meeting, said, that he had been dieting himself, and now does not suffer, except from irregularity of the heart and excessive fatigue. A week or two ago, he could not walk, on account of excessive fatigue ensuing upon the slightest exercise. Iron, strychnine and quinine, in large quantities, and French brandy cured him. After the subsidence of his trouble, eruptions occurred at the root of the nails, and there were stiffness and dryness of the palms of the hands. Last week there was œdema of the ankles, particularly the left. Forty years ago, there was painless rheumatism of the left knee. The œdema was twice as great on the left side, and

from the middle of the thigh down, there is a sensitive eruption like that of scarlet fever. Bromide of sodium relieved this. There were also present, diarrhœa, and afterwards dysentery. He can now eat what he pleases.

Analyses, Selections, etc.

Partial Incision of the Tunica Vaginalis for the Radical Cure of Hydrocele.

Dr. M. G. Echeverria, of Key West, Fla., in a paper read before the Florida Medical Association, 1892, says that total removal of the tunica vaginalis for the cure of hydrocele is liable to prolonged fever with violent consecutive accidents, as well as failure, and even fatal termination, as in a case reported by Bull, of New York. Partial excision of the tunica for the same purpose is, on the contrary, exempt from such consecutive serious, local or general reaction, and is more prompt in its effects when executed with every rigid antiseptic precaution. In fifty-two cases in which we have thus performed it, primary healing has been produced, the patient has not been in bed beyond the second day, and on the fifth he has walked without inconvenience, permanently cured.

Kinder-Wood (Curling on *Diseases of the Testicle*), after evacuating the hydrocele through an incision with a lancet, pulled out with a hook the tunica vaginalis, and with scissors excised a portion of it, dressing the wound with adhesive plaster. In three cases the patients recovered by primary healing, and in a fourth, violent orchitis supervened. Titley tried the same operation in six cases and failed in every one. These were the only references to the subject we knew of when for the first time we performed partial excision of the tunica vaginalis for the cure of hydrocele twenty-two years ago.

Hertzberg, of Fubingen, endeavored to prove the superiority of Volkmann's radical operation—*i. e.*, of incision, over injection, by analysis of forty-six cases. In thirty-three cases recovery took place without any sign of reaction. In eight cases there was severe general reaction, with subjective disorders and prolonged fever. The operations were performed with full attention to antiseptic details. A drain tube was passed through the cavity and brought out through

a counter-opening at the lower part of the scrotum and the seat of the operation, and the surrounding parts were finally covered by a dry dressing of wood-wool. In a large majority of the cases the drain tubes and the sutures were removed on the fifth or sixth day, and the patients were able to leave their beds at the end of the first or the beginning of the second week. The average duration of stay in the hospital was a little over sixteen days. By comparing tables, derived from different sources of carefully recorded and long observed cases of hydrocele treated by incision and injection, Hertzberg finds that the relapses after the former treatment constitute from 3 to 4 per cent. of the total number of cases, while those after treatment by puncture and injection of iodine amount to 8 per cent. Hertzberg further cursorily remarks that "*Professor Bruns practices partial excision of thickened indurated or superfluous tunica vaginalis, but holds that total excision of this membrane is not required, save in very exceptional cases.*"

If we have briefly presented these details (*Beitrag zur Klinische*, February, 1889), it is not only on account of their important bearing, but also to demonstrate the confusion incurred by Keyes, who says (*Annual Universal Medical Sciences*, Vol. III, 1890, Sec. E, p. 3): "Hertzberg's attempt to prove by Bruns' operation that excision of hydrocele is a method of cure superior to injections seems amusing." We are unable to explain this gratuitous reproach, for Hertzberg very distinctly asserts from the beginning that in his forty-six cases Volkmann's radical operation was performed, and endeavors to prove by their analysis the superiority of incision, not of excision, over injection, Volkmann's operation being, in his opinion, the most rational method of treating hydrocele. On the other hand, in no less explicit terms, does Professor Bruns reject total excision of the tunica vaginalis, save in very exceptional cases.

In 1870 a patient at the New York Hospital for Epileptics and Paralytics had a hæmatocele, following injury of the right testicle during one of his fits, three years before, although he stated that previous to the accident the testicle had been enlarged, but painless. The tumor was the size of a cocoanut, at times painful, but without symptoms of active inflammation or of threatening suppuration. The patient was a sailor of intemperate habits, epileptic since the age of puberty. Confident that operation could not prove injurious to him, we consented to his request for operation.

He was placed under chloroform. A free incision of the scrotum and tunica vaginalis gave issue to a chocolate opaque fluid, and the parietal layer of the tunica was covered with a thick gelatinous film of a rusty color, which easily detached itself from the membrane. The cavity was thoroughly washed out with hot water, containing 10 per cent. of carbolic acid. The oozing hæmorrhage soon stopped, and when the fibrinous deposits were completely removed from the testicle and tunica vaginalis, we excised all the redundant portion of the membrane, so as to leave sufficient of it to cover in close contiguity the whole testicle, which was not very much augmented in size. A small rubber drain tube was left in the cavity, the edges of the wound in the scrotum and in the tunica vaginalis were brought together by fine silver sutures, and the parts, protected with lint soaked in Peruvian balsam, were covered by a well-fitting dressing of oakum. The wound healed by first intention, without the least inflammatory reaction; the drain tube was removed on the second day, and, on the fourth, all the silver sutures. In the beginning there was very slight œdema, with tenderness of the scrotum, which soon disappeared; but no swelling of the testicle or effusion into the tunica vaginalis, and nothing particular was noticed in the general condition of the patient beyond the curious fact that, from the day of the operation to that on which he left the hospital, three months after, he remained completely free from fits, but having continued all the time with the bromide treatment. The testicle returned to its normal condition. We were not surprised at the result of the operation, being aware of the wonderful power of recovery epileptics have after the most formidable traumatic injuries or operations.

We had, from 1885 to 1887, the direction at Colon of the medical department of the French Society of Public Works, engaged in the construction of the Panama Canal. Hydrocele ranked, after malarial fevers, among the commonest complaints peculiar to the native laborers. The first case we had to treat was one of hæmatocele, on a mulatto, 22 years of age. The operation was performed with every attention to antiseptic precautions, which were hardly recognized in 1870. The tumor was on the left side, the sequel of a blow received two years before, and the expanded tunica vaginalis was filled with clots and sanguinolent serum. The oval segment of the superfluous tunica was excised, leaving enough of it to cover the testicle. The in-

cision healed without local or general reaction. The drain tube was left in the wound until the second day, when, there being no discharge, it was removed, and the sutures on the following day. From this time the patient walked about without discomfort, and continued on his uninterrupted perfect recovery.

Encouraged by this new success, we resorted uniformly to the identical treatment in every subsequent case. Latterly we have used sterilized silk sutures and aristol instead of iodoform, in addition to the sublimate gauze for dressing of the wound. One of the conditions of most importance for the prompt adhesion of the tunica vaginalis and the testicle is to exert a general compression of the scrotum with well adapted layers of antiseptic cotton, retained by an elastic bandage carefully placed.

The fifty-two cases we have operated on are thus distributed: Common hydrocele, single, 22; common hydrocele, double, 15; hæmatocele, single, 11; hæmatocele, double, 4.

Ten cases of single hydrocele and eight of double had been operated upon before by injection—fifteen of iodine, two of carbolic acid, and one of sublimate.

Hydrocele is endemic in certain localities of Colombo. Thus, in Carthagena it is so common that when a *potroso*, as they call those with hydrocele, is met in other parts of the country, they take it for granted that he hails from Carthagena. The people and native physicians ascribe the disease to the water drunk in the locality. We believe, however, that malarial influences play the chief part in the etiology of these cases, just as they do in malarial orchitis, notwithstanding the opinion of Le Dentre and Terrillon, who attribute this latter to the endemic lymphangitis of hot countries. While in the Isthmus of Panama, we observed on two distinct occasions that patients with malarial cachexia, at the same time affected with common hydrocele, presented a conspicuous reduction of the tumor during an energetic treatment with Warburg's tincture, attended with the most beneficial results. We frequently saw the tunica vaginalis lined with a glutinous coat of pigment, which imparted a more or less uniform chocolate discoloration to the parietal surface, and which we always removed without difficulty before closing the wound. .

Patients with single hæmatocele were all quite positive as to its traumatic origin, whereas this cause was never assigned in any of the four cases of double hæmatocele; and in every one of these latter instances a thick false mem-

brane lining the tunica vaginalis showed, by its apoplectic aspect, that the effusion of blood had been consecutive to the forming of the false membrane within the serous, in consequence of a vaginalitis undoubtedly of a malarial nature.

In 1886, a laborer we had operated on nine months before for double common hydrocele, was accidentally killed on the Panama Railroad. On post-mortem examination, both testicles were found quite normal, as also the seminal vesicles, distended with spermatic fluid. The tunica vaginalis was on either side closely united to the albuginea, and firmly attached to it along the line corresponding to the incision. There were no adhesions between the scrotum cicatrices and the testicles.

We do not deny the merits of the pure carbolic acid injection treatment in uncomplicated cases of hydrocele; we prefer it to the other injections, and have used it several times with satisfactory results. But when the tumor is very voluminous, of long standing, and has been successfully tapped before, excision of the tunica vaginalis is the promptest, simplest, and most certain method of treating hydrocele. We do not assume that it never fails; yet, having tried it under various circumstances in fifty-two consecutive cases, without a single reverse, we are warranted in giving to it the preference. The duration of treatment has been shorter than the average of the other methods. As to the comparative merits between this operation and Volkmann's, we have so far never observed the severe general reaction and untoward symptoms noticed by Hertzberg in eight out of his forty-two patients, nor has the duration of treatment with us ever exceeded six days, whereas by Volkmann's operation it has been from eight to ten days. We are convinced that to the rigid and ever-increasing antiseptic precaution taken is entirely due the success of our treatment.

Bromide of Strontium

Seems destined to displace bromide of potassium. Insist on having the chemically pure salts (Paraf-Javal) dispensed, or the standard solutions (5j to the fluid ounce), so as to avoid accidents, as toxic effects have been caused by the dispensing of impure strontium salts, the poisonous barium being a concomitant of the strontium preparations of commerce —*St. Louis Clinique*.

Circumcision.

Dr. Angus A. Gillis, of De Funiak Springs, Fla., in the *Transactions*, 1892, of his State Society, points out the important role of circumcision in the curative treatment of a large class of nervous diseases that follow the primary cause of sub-prepuceal irritations. He instanced a case in his practice where three small urinary calculi had collected under the prepuce of a child, causing a series of convulsions and other nervous troubles. Narrowing of the prepuceal orifice—phymosis—inflammation and thickening of the foreskin, adhesion of the prepuce to the glans—in short, anything that prevents normal retraction of the prepuce beyond the corona glandis, makes the operation, very generally, a necessity. In performing circumcision, remove only that portion of the prepuce that lies in front of the crown when that organ is at rest. To so limit the operation, make a mark on the organ while at rest, which mark should correspond with the crown, made on the upper surface, from the centre to the frænum. With forceps, or with finger and thumb, seize the prepuce about the point of juncture of the skin and mucous membrane, and draw the foreskin forward until the line for incision lies well in front of the glans. This traction prevents the rolling in of the skin, which occurs when the foreskin is grasped between the finger and thumb and pushed forward. Having performed traction, apply Ricord's fenestrated forceps or clasp—not transversely, but so that the clasp shall lie in line with the long axis of the body, pointing downward and outward. The flattening of the prepuce will thus be vertical instead of transverse, as in the usual mode. Then place the knife within the fenestræ, and then the cutting is done without the possibility of cutting off more than was intended. This operation is practicable only when the parts are normal or nearly so.

In operating upon adults, the mucous membrane covering the glans should be pared—not too closely, however, but allow a quarter of an inch to remain for the suture, which should be a continuous one of very small catgut.

If the foreskin is thickened by the deposition of inflammatory material, it becomes necessary to slit up the prepuce in the middle line above the glans, and remove the prepuce in two sections—cutting from the middle toward the frænum on each side. Apply dry dressing, using iodoform freely, bandage well, and leave the way clear for the passage of urine. Remove this dressing after three days, cleanse the

parts thoroughly, and treat as any other open or incised wound.

In the discussion, Dr. C. R. Oglesby, of Pensacola, stated as his opinion that circumcision in one of the surest means of preventing syphilitic disease.

Dr. R. P. Daniel, of Jacksonville, agrees with Dr. Gillis as to abnormal conditions of the prepuce being causes of reflex troubles, etc. But as to the operation itself, he thinks it always best to divide the inner fold of the prepuce, as far back as the corona, directly on the median line, and, in some instances, to remove a triangular portion on either side, so as to make the outer and inner surface adjust better.

One Thousand Cases of Labor without a Death.

This is the result obtained at the Preston Retreat, by Dr. Joseph Price. There had been one death in the building, but that occurred in a case picked up by the patrol and brought to the institution in convulsions and completely comatose. No urine could be found in the bladder. The patient died shortly after admission, and it was thought that this case could be properly omitted. Dr. Price attributes the good results to refinement in detail which is practiced, and to the application to these cases of the principles of abdominal surgery. The woman, during and for a period after labor, is a wounded woman.

In this series of one thousand cases, a number of complicated labors were dealt with successfully, both as regards the mother and child. Many feeble and impoverished subjects were treated. The patients are admitted two weeks before labor, and remain four weeks after labor. The toilet begins on admission, with a bath, a laxative, and clean clothing. Until the occurrence of labor, the woman takes two soap baths a week, the bowels are kept soluble, and the kidneys are watched. When the premonitory symptoms of labor appear, a thorough bath is given, superintended by a careful nurse, an enema is administered, and the vagina douched with 1-2000 solution of bichloride of mercury, and the woman is given clean clothing, and placed in a clean delivery room. The nurse makes a toilet and the physician makes a toilet before and after entering the room. As a rule, only one examination is made. For some six years there has been no meddlesome midwifery. It is only in complicated labors that repeated examinations are made. But two vaginal douches are given, one before and the other after labor. It has never been necessary to

repeat the douches. After the final douching, a pint or so of the fluid is poured over the thighs and external genitals, and the pad is applied. This is changed four to six times a day, for the first four days. There is never a perceptible odor. The mothers nurse their children without exception, and the mortality among the infants is very low. After labor, the bowels are kept soluble. The patients are well fed before and after labor. They remain in bed usually eleven days, and then go to the convalescent ward. —*Columbus Med. Jour.*, June, 1892.

Treatment of Typhoid Fever.

In a paper read before the Florida Medical Association (*Transactions*, 1892), Dr. Warren E. Anderson, of Pensacola, states his belief that, typhoid fever being a self-limiting disease, attempts to abort it are injurious. He cautiously administers, with most gratifying results, minute doses of *calomel* throughout the entire course of cases. Its antiseptic properties prevent rapid decomposition of the ingesta; while its stimulating effect upon the kidneys and glandular system hastens the elimination of the poison from the system. He thinks *oil of turpentine* superior to salol, hydro-naphthol, etc., as an intestinal antiseptic—the most delicate stomach soon acquiring a tolerance of it. *Quinine* is of unquestionable value, but do not keep the patient cinchonized. *Do not resort to antipyretics* until the temperature rises above 102° F. Where an antipyretic is required, he prefers *antikamnia*. Cold water sponging of the neck, face and upper extremities is grateful to many patients. In the ten recent cases in which he has used *hot-water enemata*, flushing the colon, he has been more than pleased with the results. He has been repaid by allowing *copious draughts of water*—not warm. Until convalescence, nutrition should consist of boiled milk with freshly expressed juice of beef.

Dr. Joseph D. Rush, of Apalachicola, Fla. (*Idem*), reports favorably on the value of *salol in typhoid fever*. He details two cases. One, a married lady, brunette, age 24 years, with fever reaching 105° F. by the seventh day, after the failure of calomel, soda and quinia, was given the following:

R—Salol.

Antikamnia.....āā ʒss

Quiniæ sulph..... gr. vj

Mix. Make 12 capsules. S: One every three hours.

This prescription was kept up twelve days, when convalescence began. Alcoholic baths to the spinal column were

given once a day. Diet was strictly boiled milk and beef tea. The other case was that of a colored boy, age 13 years, temperature 105°. Same prescription, sponging and diet as above. Recovered. His conclusions are that salol as an internal antiseptic, with daily sponging of the body with alcohol, and with a diet of hot boiled milk, promises much in the treatment of low and continued fevers, with bowel complications.

Notes on Urine Analysis.

In the following pages (*South. Calif. Prac.*, July, 1892,) F. D. Bullard, A. M., M. D., of Los Angeles, Calif., Lecturer on Chemistry and Toxicology, College of Medicine, University of Southern California, has culled from several authorities (Vierodt, Millard, Holland, Saundby, Hofman and Ultzmann, Gibson and Russell, Tyson, Landois and Sterling, Yeo, Gouley, Bartly and Roberts).

AVERAGE COMPOSITION OF NORMAL URINE.

Substances.	Per Cent.	Grs. per day.
Water,	96.00	50 oz.
Solids,	4.00	1000 grs.
Urea,	2.00	500
Uric acid,	0.04	10
Hippuric acid,	0.075	15
Extractives,	1.00	170
Pigment, mucus,		
Xanthine,		
Creatinin,	0.075	15
Chlorides of K and Na,	1.00	170
Sulphates of K and Na,	0.11	40
Phosphates of K and Ca,	0.12	45
Phosphates of Mg and Ca,	0.08	30

Also traces of other substances—indican, carbolic, oxalic acids, etc.

AMOUNT OF URINE.—NORMAL.—In 24 hours averages 3 pints, or 1500 c. c., for adult male. Female four-fifths as much; may vary from 25 to 80 ounces in health.

Factors which increase quantity.—Elevation of blood pressure; contraction of cutaneous blood-vessel (cold); copious drinking; excess of nitrogenous diet; presence of soluble matter—sugar, salt; presence of urea; various medicines.

Varies in general, according to amount of water taken into the system and disposed of in other ways.

ANOMALIES IN QUANTITY.—*Polyuria*—

With normal amount of solids } u. spastica.
 } u. potus.

With lessened solids—hydruria.

With increased solids—

(a.) If due to sugar, equals diabetes mellitus.

(b.) But if not, equals diabetes insipidus (azoturia).

Polyuria occurs in chronic interstitial nephritis, twice normal amount; nervous affections—hysteria, convulsions and after-excitement; diabetes two to seven times normal amount; hydræmia and anæmia; polydipsia, or after drinking certain fluids—coffee, beer, wine; after obstruction and during absorption of exudates.

Oliguria occurs chiefly with febrile processes; in loss of water other ways—diarrhœa, cholera, perspiration, dropsies, and exudates; by reduced blood-pressure—weak heart; in *acute nephritis*; in chronic parenchymatous nephritis; in retention due to obstruction, stone stricture, difficult micturition.

Anuria occurs with severe kidney affections, and in connection with uræmia; in strictures, stone, tumor, etc.—the so-called retention of urine.

It is *very important* to ascertain the amount in twenty-four hours. Instruct patient to throw away amount voided at a noted hour, and to pass in a *clean* vessel the urine until the same hour next day. Bring urine in *clean* bottle, keep it cool, and examine within twelve hours.

THE COLOR OF URINE has marked variations, from almost as clear as water to dark reddish yellow after sweating.

The intensity of color is a rough indication of degree of concentration. Many adjectives are used—e. g., straw, lemon, amber, etc.; or Vogel's scale—pale yellow, light yellow, yellow, reddish yellow, yellowish red, red, brownish red, reddish brown, brownish black. Color depends on small amounts of distinct substances; the most important are—urobilin—from coloring matter of bile; urochrome—special urinary pigment, when oxidized, coloring sediment dark; indican—from putrefactive changes consequent upon pancreatic digestion.

DEPARTURES FROM THE NORMAL COLOR.—

Almost colorless—in (a) neuroses, (b) hydruria, (c) diabetes, (d) u. potus, (e) chronic nephritis.

Highly colored—due to concentration and uro-erythine in fevers: Blood red—from blood, and some vegetables.

Smoky brown—decomposed blood (acute nephritis).

Dark brown—hæmaturia and poisoning from potassium chlorate, carbolic acid, iodoform.

Greenish—due to bile.

White—due to chyle or pus.

Very dark—chronic ague, melanotic cancer.

Medicines—(a.) Chrysophanic acid, rhubarb and senna—deep yellow to acid, bright carmine to alkaline urine; (b.) Carbolic acid, creasote and coal-tar products give a greenish black color to urine.

CONSISTENCY.—Normally of a thin, easily dropping fluid, which, when shaken, gives a foam which soon vanishes on standing, while, if sugar or albumen are present, foam remains some time. Bile or pus render urine viscid.

NORMAL URINE is clear and transparent, but, on standing, shows a mucus cloud:

1. Sometimes concentrated urine, on cooling, is cloudy from urates (K, Na, Ca, Mg). These sinking form sediment which is dissipated by heat.

2. Urine, on standing some time, and more rapidly in hot weather, becomes cloudy from *ammoniacal fermentation*. $\text{Urea CO(NH}_2)_2$ plus $2\text{H}_2\text{O}$ equals $(\text{NH}_4)_2\text{CO}_3$, renders urine *alkaline*; hence phosphates deposit, which, with numerous bacteria, form a *white sediment*.

3. Normally, acid urine may be partially opaque at the moment of passing from the presence of earthy phosphates (Ca, Mg.), which shortly subside and form cloudy sediment, cleared up by acids, but increased by heat.

ABNORMAL URINE only is turbid on passing—

In nephritis.

In diseases of urinary passages, as cystitis when phosphates are added to the organic constituents on account of alkalinity.

On account of blood, pus, or fat.

REACTION.—Always acid from presence of acid urates and phosphates (especially Na_2HPO_3). After meals, acidity declines in two hours; may be alkaliescent, due to food or loss of HCl (?).

Urine, on standing a short time, increases acidity—acid fermentation. After standing longer, becomes alkaline and temporarily changes red litmus blue.

Increased acidity occurs in fevers and inflammations, especially of liver, breast, and lungs.

In digestive disturbances—acid dyspepsia.

In gout, acute rheumatism, and diabetes.

Alkaline urine is found in cystitis;

With considerable mixture of blood or pus.

Occasionally in debility, chlorosis, and some organic nervous diseases.

During resorption of exudates, especially of pleura or peritoneum.

In dilatation of stomach with vomiting.

Reaction is tested by red and blue litmus paper, acid urine turning blue litmus paper red.

By comparing the amount of a deci-normal standard solution of Na HO (four grains to 100 volumes) required to neutralize a given quantity of urine, and the quantity used to render a like volume of a saturated solution of oxalic acid neutral, we can determine acidity of urine in terms of oxalic acid.

SPECIFIC GRAVITY.—Usually 1015 to 1020 at 60 degrees. When first passed specific gravity is too low by about seven degrees. Normally, after copious drinking, abstinence from proteid food and in cool weather, specific gravity may be 1003; while, after abstinence from liquids, much animal food and active sweating, it may reach 1060.

Specific gravity depends on the absolute quantity of solids and the amount of water in urine, normally varying inversely with the amount.

In taking specific gravity, glass must not be too narrow—one-half inch from stem to side.

Instrument must float freely and be perfectly clean—no grease.

Surface of urine must be free from froth.

Read lower figure of meniscus.

If not enough urine, dilute with distilled water—e. g., one volume of urine and four of water equals five bulks; specific gravity of M equals 1004; therefore specific gravity equals 1000 plus four times five, equals 1020.

Specific gravity is increased in diabetes mellitus and diabetes insipidus (?) (the amount of urine is also increased).

With decreased amount of urine (a) in acute fevers, gout and rheumatism; (b) in acute nephritis, when amount is small and albumin present.

Specific gravity is lowered in chronic nephritis, (a) in early stages with normal amount but lessened urea; (b) in later stages with increased urine.

Waxy degeneration of the kidneys.

Diabetes insipidus, usually.

Hydruria—solids lessened.

Hydræmia and dropsy.

Multiply last two figures of specific gravity by number of ounces and add ten per cent. to get total solids [Haines]. (Trapp's factor, two; Haeser's, two and one-third times last two figures of specific gravity—give number of parts per 1000.)

SOLIDS.—*Increased* in diabetes and lithæmia.

Decreased in acute and chronic nephritis. Hence, it is very important to ascertain amount of solids.

ODOR.—Due to urea and various acids, and is called peculiar, aromatic, characteristic, strong, ammoniacal, etc., according to reaction, intensity, and composition.

It is pungent and ammoniacal in cystitis.

Feculent in vesico-rectal fistula.

Fruity, chloroform-like, apple-like, in diabetes, especially as precursor of coma.

Various foreign odors are due to food or medicines—e. g., radishes, onions, valerian, assafœtida, give their peculiar odors, and turpentine gives to urine the odor of violets.

CHEMICAL COMPOSITION.—Urea composes half the solids; chlorides, nearly half of rest; and phosphates are usually determined by tests.

UREA.— $\text{CO}(\text{NH}_2)_2$, five hundred grains (2 per cent.) is the chief end-product of the oxidation of the nitrogenous constituents of the body.

Urea is produced in the liver and lymph glands (?), and is probably selected from the blood by the epithelial cells of the convoluted tubes

Urea is increased normally (a) by nitrogenous diet; (b) by rapid tissue-drainage; (c) in polydipsia.

Increased by starvation, inanition, and low diet.

Medicines affect amount of urea—increased by morphine, arsenic, phosphorus, and decreased by quinine.

Pathologically urea is increased (a) in fevers, (b) inflammatory affections, (c) diabetes, (d) congestion of liver, (e) phthisis, (f) typhoid fever, (g) pneumonia, and (h) pyæmia.

Urea is diminished abnormally (a) in chronic liver diseases, (b) Bright's disease, (c) dropsy, (d) after-fevers, and (e) in all conditions where tissue-change is hindered—cholera, paralysis, etc.

TESTS FOR UREA.—

I. Evaporate a measured amount of urine to one-half its original volume, pour it into test-tube and add one-third of its volume of HNO_2 , then cool by plunging test-tube into cold water. Crystals of nitrate of urea form: If in five minutes, there is an excess; if in twenty minutes, there is normal amount; if not till two hours, there is a deficiency.

II. Ascertain amount of chlorides, and from two-thirds to four-fifths of the remaining solids is urea.

III. Again, the percentage of urea can be approximately determined from the specific gravity; if the chlorides are normal, and there is no sugar nor much albumen, then 1020 specific gravity equals two and a half per cent., 1014 equals one per cent., 1028 equals three per cent. of urea. If chlorides are low and specific gravity high, urea is increased. Other tests for amount of urea generally require a special apparatus.

URIC ACID is generally regarded as the first step in the formation of urea, varying in amount with it. If deposited soon after micturition, it indicates a tendency to form gravel.

Uric acid increased by high living, acute fevers, lung and heart diseases, with dyspnœa, lukæmia, and acute rheumatism.

Uric acid is decreased in chronic kidney diseases, hydruria, gout, and diabetes mellitus (?)

Tests.—To 100 parts of urine, add ten per cent. HCl; fine crystals, like cayenne paper, appear within forty-eight hours.

Murexid Test.—In a watch-crystal dissolve uric acid with cold HNO_2 , and then heat *gently* with evaporation to dryness. Touch residue with drop of ammonia water, a bright purple red color appears.

URIC ACID CRYSTALS are rhombic, in form of whetstones, rosettes, sheaves, etc.

In healthy urine, uric acid exists in form of urates of Na and K, which are normally soluble, but in cool places are precipitated as pinkish powder. If urates are in excess, same happens at higher temperature, forming "brick dust," or lateritious sediment.

Tests.—Fill test-tube with turbid urine and heat upper half; or, to another portion of same add KHO, and if turbidity clears up, it is due to urates; not so if phosphatic in origin.

Uratic deposits occur especially in fevers and chronic hectic diseases.

Microscopically, the rare crystalline urate of sodium occurs in very acid urine, and usually the amorphous moss-like form in ordinary acid urine.

In alkaline urine, brownish spheres with spines—urate of ammonium—occur in company with triple phosphate crystals.

CHLORIDES.—COMMON SALT.—About one-fourth of total solids.

Increased in ague, diabetes insipidus, and Bright's disease.

Decreased in febrile diseases, especially if accompanied by an exudation—e. g., pneumonia, where, before crisis, it may be wanting, and is lessened also in chorea and pemphigus.

Tests.—Acidulate urine with a few drops HNO_3 , to prevent precipitation of phosphates. Add gradually a solution of AgNO_3 , white AgCl forms curdy if normal, and will occupy, on settling, at least one-fourth of the column.

1. Make a saturated solution of AgNO_3 ; twenty-nine grains to 1000 minims of distilled water (an equivalent of ten grains of NaCl); 2. Take one drop of neutral potassium chromate solution as indicator; 3. Dilute ten minims urine in fifty minims of distilled water; 4. Note number of minims used before mixture becomes permanently red-yellow. Subtract one m. for excess; 5. One-tenth per cent. of number of drops equals the per cent.—e. g., 7m. equals .7 per cent. or 3.175 grains per ounce.

PHOSPHATES.—PHOSPHORIC ACID occurs in urine in two groups: 1. As phosphates of alkaline bases, Na and K, two-thirds; 2. As phosphates of earthy minerals, Ca and Mg, one third. The former as acid phosphate of sodium gives urine, in a large degree, its acidity, while the latter are met with in deposits.

TRIPLE PHOSPHATES, as triangular prisms, occur after ammoniacal decomposition; visible to naked eye as a white sediment in turbid alkaline urine.

CRYSTALS OF PHOSPHATE OF LIME in feebly acid urine, in form of rods, stars, rosettes, crosses, and feathers, occur in phthisis, cancer of stomach, rheumatism, and even in health.

AMORPHOUS PHOSPHATE OF LIME occurs as copious sediment in urine which is alkaline when passed (usually).

Tests.—To urine in test-tube add a few drops of KHO and boil; *earthy* phosphates are precipitated.

To filtrate add one-third volume of Mg m ; alkaline phosphates are precipitated; Mg m . equals five parts each of MgSO_4 and AmCl , forty parts each of Aq. Am. and Aq. destil. If on application first of Mg M a milky turbidity exists, phosphates are normal; if creamy, in excess; if a slight milkiness, there is a deficit of phosphates.

Total phosphates are increased in inflammatory diseases of nervous structures; temporarily in acute febrile diseases; occasionally in acute mania, brain tumor, chorea, acute yel-

low atrophy of liver, diabetes, phthisis, chronic rheumatism, leucocythemia, and osteo-malacia.

A diminution of phosphates occurs in chronic brain disease; chronic heart or kidney diseases; chlorosis, ague, rickets (?) and gout.

Phosphate of lime increased in rickets, long-continued suppuration, and organic disease of the spinal cord.

OTHER NORMAL INGREDIENTS, AN EXCESS OF WHICH CONSTITUTES AN ABNORMALITY, ARE—

1. OXALIC ACID, as envelope or dumb-bell crystals of oxalate of lime, occurs in oxaluria, catarrhal jaundice, mental depression, atonic dyspepsia, and may form mulberry calculi.

2. CREATININ in imbricated polyhedral plates (fifteen grains normally) is increased in fevers and diminished in diabetes, debility, and nephritis.

3. HIPPURIC ACID, rhombic crystals (fifteen grains) is increased in fevers, chorea, and diabetes mellitus.

4. SULPHURIC ACID (twenty-three grains) occurs as sulphates. Test, BaCl_2 .

5. MUCIN is present in all urines, healthy or morbid, and occasions embarrassment in testing for albumen more than any other substance.

Best Test.—Put saturated solution of citric acid in test-tube; add urine by carefully pouring down side; a turbid disc forms in a few minutes.

Acetic acid coagulates mucus, which is not dissolved by heat.

In case of women, mucus is more abundant, forming nebulæ.

Heat, and a solution of HgCl_2 , will not coagulate mucus—a test which distinguishes mucus from albumin or pus.

Mucus is increased in all diseases of the urinary passages, especially cystitis, and in fever.

Some forms are characteristic:

Minute roundish pin-head floccules—mild cystitis.

Threads of mucus one-half inch long, with or without pus corpuscles—gonorrhœa.

Microscopical mucus threads, cylindroids, long thread or tape-like in texture, with varying thickness, occur in cystitis and in nephritis; hence may be confounded with casts.

SUBSTANCES WHOSE PRESENCE IN THE URINE CONSTITUTE AN ABNORMALITY.

ALBUMEN is found in urine when blood-pressure in renal vessels is increased or the animal membrane defective in

some place. Albumin is a colloid—i. e., not easily crystallized nor passing readily through animal membrane, on account of large size of molecules of $C_{216}H_{169}S_3O_{88}$ (?), and is probably derived by transudation in the glomeruli only when above conditions exist.

Albumin in Conditions of Apparent Health.—The so-called functional, physiological, or cyclical albuminuria, and the the albuminuria of adolescence, may be taken as an evidence that on account of some transitory disturbance of the kidneys, or blood-vessels, or the blood, there is a state of abnormal permeability of the glomerular epithelium.

Physiological albuminuria, in small quantities, may occur after severe exercise (Mucin-Millard?), hearty eating; in the newly-born, in mother after suppression of milk; after copious drinking and baths.

Pathological albuminuria may be due to—

I. *Increased blood-pressure in renal vessels* in—1. Pregnancy; 2. Heart disease or anything causing congestion of the pulmonary circuit, which may extend to the renal veins—emphysema, pleuritic effusion, etc.

II. *Paralysis of renal vaso-motor nerves* from—1. Reflexly long-continued abdominal pain; 2. Convulsive disorders—epilepsy, dyspnoea from strychnine, cerebral concussion, and violent emotions; 3. Certain drugs—excessive use of morphine.

III. *Condition of the renal epithelium* in—1. Acute fevers, especially exanthemata, probably by causing “cloudy swelling;” 2. Degeneration and inflammation of kidney, Bright’s disease; 3. Chemical irritation from drugs—carbolic acid; 4. Functional weakness on account of imperfect nourishment, or complete withdrawal of NaCl—e. g., in ischæmia, anæmia, after hæmorrhage, scorbutus, icterus, and diabetes.

Mixed and False Albuminaria.—Due to blood or pus in urine from other than kidney lesions.

Tests for Albumin.—If at all turbid, filter the urine. If highly acid, render it less so by KHO. If alkaline, render it slightly acid by acetic acid; else serum-albumin may become acid or alkali-albumin, which are not coagulated by HNO_3 or heat.

The two best known tests are the nitric acid (Heller’s) and the heat-test.

Heller’s Test.—Put urine in test-tube, and underlay with one-half drachm of pure strong HNO_3 ; albumin appears as a ring at contact; hold in bright light on a dark background.

If a resinous body present, cloud seen at juncture.

Uric acid and urates give a cloud higher up.

Crystals of nitrate of urea may occur at the time (if concentrated).

Mucin may accompany albumin ring, but usually higher in tube; below albumin there is a brown ring due to coloring matters, rose-tinted if much indican.

Thus, in Heller's test, there are four zones—orange-colored, albuminous, urates, and mucus.

Heat Test.—Slightly acidulate to prevent the precipitation of phosphates, heat upper half of test-tube of urine, and examine in good light on said background. This will bring out any difference between the urine before and after heating.

Heat entire amount, set aside, and note amount of deposit as compared with entire column—one-fourth, one-half, etc. (The so-called 50 per cent., etc.)

The best common test is the *Nitro-Magnesian Test*, or *Roberts'*: Nitric acid, one part; saturated solution of magnesium sulphate, five parts. Filter and employ the contact method; will detect one part of albumin in 150,000 of urine. Have tube perfectly clean, and hold tube nearly horizontal.

Advantages.—Mucin and albumin coagulate in different zones—mucin above. Albumin zone is condensed, compact, lardaceous, clearly and sharply defined. One-tenth of inch of ring equals one-tenth of one per cent. of albumin.

BLOOD gives a tint to urine varying with amount present—1 to 1000 smoky, 1 to 500 bright cherry color. Sometimes there is a sediment, not infrequently partly coagulated; but sometimes only a fine even deposit.

A small amount of blood, or at least not an abundant amount, uniformly mixed, the color being retained or more frequently changed to a brownish color, an acid reaction (if not too much blood) indicates a

Hæmorrhage from the kidney, proved by blood-casts, and red corpuscles present as rings. Cells and casts, if present, are stained brown by coloring matter of blood. Microcytes—small corpuscles one-half size or less—are characteristic of parenchymatous hæmorrhages. Profuse hæmorrhages will deposit normal blood corpuscles, with clots of various shapes.

In hæmorrhage of pelvis of kidney, especially if from stone, urine alternates between bloody and free from blood because cause is temporary or ureter stopped. Vermiform coagula from ureter are rare, and great pain is experienced when passing them.

A brown color of sediment and of urine indicates acute hæmorrhage—nephritis

Sudden bloody urine, with valvular lesions, means renal infarction.

Individual blood corpuscles occur in hyperæmia of kidney.

Cystic hæmorrhages generally are profuse, may even be fatal, especially if from villous tumors. Blood is not intimately mixed with urine, and urine is often alkaline—always if there is much purulent catarrh, but otherwise acid. Presence of carbonate of ammonia in quantity is proof of cystic hæmorrhage. Specific gravity is about normal.

Pyorrhæa, or medicines, may render urine with blood alkaline, even if from kidney-pelvis. If from kidney or pelvis, polyuria is common, and hence specific gravity is lowered.

Form of the blood-clot sometimes shows location of hæmorrhage. Lumpy, torn, irregular clots come from bladder, or, possibly, from pelvis. Long rod-shaped, from passage through ureter, means hæmorrhage above them.

In hæmaglobinuria, the blood-coloring matters are in solution, and it occurs in those diseases which are accompanied by so called dissolution of the blood—malignant intermittent, after inhalation of CO_2 , poisoning by K_2ClO_3 , chloral, carbolic acid; and sometimes hæmoglobinuria occurs periodically from some unknown cause. Also in insolation and severe burns.

Hæmorrhage from the kidneys occurs sometimes in fevers, especially exanthemata, due to hyperæmia; usually in parenchymatous nephritis; regularly in atheromatous degeneration of kidney vessels; with thrombosis of renal veins—e. g., puerperal fever; constantly with renal calculi; and lastly, in cancer.

From the bladder hæmorrhages may be due to stone (worse on exercise); ulceration of its neck; papilloma; carcinoma villosum.

In urethral hæmorrhage blood comes at beginning of urination only, and between micturitions clots may escape.

Tests.—Red blood corpuscles retain their characteristics for a long time in acid urine (small discs with central shadow). In dilute or ammoniacal urine corpuscles swell or become spherical. In concentrated urine they are crenated; if alkaline, they become shrivelled; and in cystitis accompanied with many white blood corpuscles.

Chemical Test.—To urine add one-half volume KHO. Precipitates PO_3 , carrying hæmatin in garnet flocculi; or, to suspected urine add a few drops of tincture guaiac; shake

well and add a few drops of H_2O_2 ; the precipitate changed to blue. (Almen's test.)

PYURIA.—As pus is an albuminous fluid, urine containing it will answer test for albumin. Urine will contain pus corpuscles which are spherical, granular, opaque, with nuclei, and are twice as large as blood corpuscles.

Donne's Tests.—Let urine stand for a few hours to allow pus to settle; into deposit put piece of KHO ; pus will grow thick, tough, and gelatinous, like the white of egg.

In acid or neutral urine, pus forms an opaque white deposit, but in alkaline urine it occurs as a gelatinous, ropy precipitate which beginners are apt to mistake for mucus or albumin.

Pyin coagulated by solution of HgCl_2 ; mucus is not.

CHYLURIA rarely looks like milk with cream at surface; responds to albumin tests; agitated with ether clears up with fatty layer on top.

FAT occurs in urine in *filaria sanguinis hominis*, phosphorus poisoning, yellow fever, long-continued suppuration, fatty degeneration of urinary apparatus, injuries to bones in phthisis, and when sugar is present, etc.

SPERMATIZOEA are ciliated bodies one-six-hundredth of an inch long, shaped like a tadpole. May be voided after coition, involuntary emission, or be an indication of spermatorrhœa. Their presence may indicate masturbation or be proof of rape.

BILE gives to urine various shades of colors, from dark yellow to greenish brown. Its presence can be proved by tests for bile acids or bile pigments.

The bile pigments are recognized by a play of colors in which green is the distinctive one, produced by the action of several reagents.

The most common test is Gmelin's, performed by placing a few drops of urine on white porcelain plate, and near by a few drops of *fuming* nitric acid; a play of colors—green, blue, violet, red, and yellow—is seen.

Or, take urine and HNO_3 aā, underlay with H_2SO_4 ; produces play of colors and green tint.

Take urine and HCl āā, underlay with HNO_3 ; produces play of colors and green tint.

If small amount only of pigment is present, acidulate with acetic acid, shake up with chloroform, pour off urine, and test chloroform for bile pigment.

The froth produced on shaking is persistent and yellow.

A piece of blotting paper moistened by urine retains its color on drying.

Leucin and tyrosin² are found in urine loaded with biliary coloring matter.

Test.—Evaporate urine and crystals will be deposited—leucin in spheres and tyrosin in needles. They are characteristic of the destruction of hepatic cells, most commonly in rapid disintegration of liver, acute yellow atrophy, phosphorus poisoning, malignant fevers, as well as various hepatic disorders.

CASTS are most important of all pathological ingredients of urine, and almost invariably found in connection with albuminuria; the only important exception is in hepatogenous (obstructive) jaundice, when they are intensely stained by bile pigment.

Take a few drops by pipette from bottom of glass, and examine thoroughly; it is sometimes best to stain with a little gentian violet.

They are usually the result of renal inflammation produced by an exudation into the tubes, forming molds. They are albuminous matter, and if they are washed away without the separation of epithelial cells, there results

Hyaline Casts, which are transparent, well-defined, and brittle, waxy, and are evidence of serious nephritis.

If epithelial cells adhere to the plastic matter, they form

Epithelial Casts, which mark the process of desquamation.

If these cells have undergone degeneration, we have

Granular Casts, opaque and yellowish.

Fatty Casts, with free fat globules along with coagulated matter.

Blood Casts are composed of coagulated blood, with red corpuscles imbedded. They show the hæmorrhage originated in secreting structure of the kidney.

Recent nephritis gives rise to hyaline, blood, and epithelial casts.

Older nephrites have granular, fatty, and waxy casts.

Casts are scanty in engorgement, fever, physiological albuminuria, contracted, and amyloid kidney.

Abundant in acute, and frequently in chronic, nephritis.

Variations in number of casts are common.

EPITHELIUM.

Three varieties can, with certainty, be made out—the round, the conical, and the flat.

The round cells are from the kidney, the pelvis, or the male urethra. They are larger than pus corpuscles, and have a well-defined nucleus. The presence of albumin differentiates renal from urethral cells.

The conical cells are twice as long as broad, are uni- or bi-polar, and are from pelvis.

The flat cells are from bladder or vagina; they are large, and the vaginal epithelia are often imbricated. To preserve epithelia and casts, urine must be acid.

Renal epithelium occurs only in kidney troubles, notably nephritis, and is accompanied by tube-casts.

URINARY DEPOSITS.

I. ACID URINE.—A. *Amorphous Granular*.—1. Dissolved by heat, re-appears when cold; often reddish—equals *urates*; 2. Not by heat, but by acetic acid—equals tri-basic calcic phosphate; 3. Small refracting granules, soluble in ether—equals fat or oil granules.

B. *Crystalline*.—1. Uric acid, reddish cross, or whetstone; 2. Calcic oxalate, envelopes, or dumb-bell; 3. Cystin, hexagonal plates soluble in NH_4HO ; 4. Leucin and tyrosin in form of spheres and needles.

II. ALKALINE URINE.—A. *Amorphous*.—Completely so, and granular; soluble in acids without effervescence; equals tri-basic calcic phosphate.

B. *Crystalline*.—1. Triple phosphate “coffin lid,” soluble in acids; 2. Am. urate spheres (yellow) with spines; 3. Calcic carbonate, biscuit, dissolves in acid with effervescence; 4. Calcic phosphate, club-shaped; 5. Calcic oxalate, envelopes, etc.; 6. Leucin and tyrosin (rare).

ORGANIZED DEPOSITS.—Blood, pus, mucus, fat, epithelium, casts, mostly in acid (if well-preserved). Lower micro-organisms—micrococci, bacteria, bacilli; fungi moulds, mostly in alkaline except the yeast-plants, and after emission mostly.

Yeast-plants are vesicular oval cells, arranged as rosary beads.

Sarcinæ are small cells grouped in cubes in alkaline urine.

Penicillium glaucum form network of interlacing fibres coated with fine urates.

Oidium lactis in fermenting urine of diabetes.

The bacteria may be: Monad, quiet or quivering; rod at rest or moving; vibriones; chain form longer than vibriones; gonococci, bacillus smegmæ.

GLYCOSURIA—If abundant and *persistent*, and associated with excessive eating or drinking on part of patient, who, at same time, is emaciating, means

DIABETES MELLITUS.—Urine is then pale, of a fruity

odor, very abundant (may be two gallons), and of high specific gravity—1025 to 1045.

Temporary slight glycosuria may follow excessive saccharine diet; after administration of chloroform, ether, chloral hydrate, turpentine, salicylic acid, benzoic acid, glycerine, camphor and carbolic acid; after poisoning by strychnia, morphia, arsenic, phosphorus, and carbon monoxide. It may be incidental to various diseases of brain and spinal cord. It may accompany phthisis, pneumonia, asthma, cirrhosis, and even be intermittent like malaria.

Before testing urine for sugar, albumin must be removed by acidulating slightly, boiling, and filtering.

Tests.—Bismuth or Böttger's: Put in test-tube equal volumes of urine and KHO, with pinch of sub-nitrate of bismuth, and boil; powder turns gray, brown, or black, if sugar is present.

Put two volumes of urine and one volume of KHO in test-tube; heat to boiling—lemon yellow to blackish brown color indicates sugar. (Moore's test.) Add a few drops of HNO_3 ; dark color vanishes, and odor of molasses is given off.

Haines' ready one-fluid test: Heat $\frac{1}{2}$ dr. of solution; add five drops of urine; heat again; yellow or red cupric oxide falls if sugar is present.

Haines' Solution.—R_y—Cupr. sulph..... $\frac{1}{2}$ drachm
Glycerine.....2 drachms
Potass. caust..... $1\frac{1}{2}$ drachms
Aq. destill ad.....6 ounces

Glycerine-Cupric Quantitative Test.—Dissolve twenty-eight grains CuSO_4 in one ounce glycerine; fifteen m. equals one-eighth grain of sugar.

Put fifteen m. of solution, thirty m. KHO, thirty Aq., and boil; plus thirty of urine and boil again; if blue color entirely lost, there is at least two grains to ounce, or 4 per cent. (480 divided by thirty times one-eighth equals two grains). As in diabetes, the extremes are .5 to 10 per cent.; this will detect minimum amount.

Rule.—Divide 60 by number of drops used to obtain grains per ounce. Take one-fifth of grains for per cent.

Fehling's Solution.—

A. CuSO_4 , $1\frac{1}{2}$ drs. water to 3 ounces.

B. Rochelle..... 6 dr., 4 grs
NaHO (s.g. 133).....6 dr
Aq. destill ad.....3 oz

For use, mix A and B āā. Boil inch of solution in test-

tube; add urine to one and three-fourths and boil—red cuprous oxide shows sugar is present.

PLAN OF EXAMINATION.—Add a specimen of the twenty-four hours' urine to stand for an hour, and examine within six hours after last urination. Then note carefully: Daily amount; color and transparency (test for bile if yellowish green); re-action; specific gravity; total solids (Haines' method); pour off urine, and examine both urine and sediment; filter urine; test urine, if not perfectly clear, for mucin by citric acid; for albumin, by Roberts'; for sugar, by Haines', if found by glycerine cupric test; estimate chlorides; estimate urea; examine deposit chemically for urates, phosphates, pus, and mucus; examine deposit microscopically for crystals, casts, epithelia, pus corpuscles, blood corpuscles, and micro-organisms; give conclusion.

GENERAL NOTES.

NEPHRITIS.—*In acute parenchymatous nephritis*, the urine presents the following points: Small amount, under thirty ounces; high specific gravity, over 1020; acid reaction; smoky to reddish brown color, lessened urea; and considerable of a deposit consisting of epithelial, hyaline, blood, and granulated casts, red and white corpuscles, renal epithelium, and mucus. Albumin is present from a half to one per cent., "dense cloud," by HNO_3 test. Other symptoms are dropsy, pallor, headache, slight temperature; lasts few weeks; changes good.

Chronic parenchymatous nephritis is often a continuation of the acute form. Urine is pale, acid, increased with lessened urea and numerous epithelial, fatty, granular, and hyaline casts. There is considerable albumin. Dropsy of face, feet and legs is very common.

Interstitial nephritis may be hyperplastic or suppurative. In former case, urine is increased in amount and frequently voided; has a low specific gravity—1000; is acid, of a clear, pale color, and has scanty, small, hyaline, and granular casts. Pulse is hard, apex of heart displaced, micturition frequent, albumin and casts present, and retinal changes common.

In suppurative interstitial nephritis, there is an abundant sediment of blood and pus corpuscles, bacteria, and granular cylinders.

PYELITIS.—The acute form occurs after interference with the urinary organs; amount of urine is lessened; color, dark and turbid; gravity, high; re-action, acid; albumin present from one-tenth to five; papillary plugs are present.

In *chronic pyelitis*, urine is increased—pale, low, acid; sediment consists of pus, crenated in form; purulent papillary plugs and caudate epithelia. Pyelitis may be calculous or tubercular, according to cause.

CYSTITIS.—There are three grades, both acute and chronic. In the first grade, the urine contains neither albumin nor pus, but there is a great increase of mucus, and the re-action is acid. In the second grade, urine is alkaline; contains albumin and pus, and has a glutinous, greenish sediment. In the third grade, there is a putrid, viscous urine, with a strongly alkaline re-action containing much albumin, pus, and blood.

Eighty in one hundred of *urinary secretions* are made of uric acid and urates. Next in frequency are the *calcium oxalate* or mulberry calculi. Secondary to these there is a deposit of *mixed phosphates*—alternating sometimes; hence, cut stone and test each layer. Burn a portion on platinum foil; if it chars greatly, it is uric acid or urates; both respond to murexid test, the urates dissolving in boiling water, and uric acid not. If it chars but slightly, the phosphate, oxalate or carbonate of calcium is present. HCl dissolves carbonates with, and the other ingredients without, effervescence. Acetic acid differentiates the oxalates from the phosphates, dissolving the latter but not the oxalates. If stone is present in the bladder, blood may be in urine after exertion; cystitis is usually present, and re-action alkaline; not so if stone is smooth.

In *spermatorrhœa* urine is alkaline, phosphates in excess, spermatozoa, CaCO_3 , $\text{AmCa}_3(\text{PO}_3)_2$ and AmMgPO_3 crystals present.

To determine if a *purulent sediment* arises from *urethra* or not, have patient urinate in two vessels; the first one only in urethritis would contain pus.

Book Notices.

Uses of Water in Modern Medicine. By SIMON BARUCH, M. D., Formerly Chairman of Board of Health of South Carolina; Attending Physician to Manhattan General Hospital, and New York Juvenile Asylum, etc. *In Two Volumes.* 12mo. Total pages, 343.

Electro-Therapeutics of Gynæcology. By AUGUSTIN H. GOELET, M. D., Membre du Societé Francais d'Electrothérapie, etc. *In Two Volumes.* 12mo. Total pages, 397.

Cerebral Meningitis—Its History, Diagnosis, Prognosis, and

Treatment. By MARTIN W. BARR, M. D., Resident Physician in Pennsylvania Training School for Feeble-Minded Children, Elwyn, etc. 12mo. Pages 93.

Cancer and Its Treatment. By DANIEL LEWIS, A. M., M. D., Ph. D., Surgeon to New York Skin and Cancer Hospital; Professor of Surgery (Cancerous Diseases) in New York Post-Graduate Medical School. 12mo. Pages 127.

Lectures on Tumors from a Clinical standpoint. By JOHN B. HAMILTON, M. D., LL. D., Professor of Principles of Surgery and Clinical Surgery, Rush Medical College; Formerly Supervising Surgeon-General U. S. Marine Hospital Service etc. *Second Edition.* 12mo. Pages 150.

Sleep, Insomnia, and Hypnotics. By E. P. HURD, M. D., One of the Physicians to the Jaques Hospital, Newburyport, Mass. 12mo. Pp. 112.

Each of the eight volumes above named is a monthly number of "The Physician's Leisure Library," published by Mr. George S. Davis, of Detroit, Mich., in paper backs, at 25 cents each; in cloth, 50 cents each. Subscription price (in paper), \$2.50 a year—12 numbers—each on a different subject by a well-selected author. As it supplies the place of a monthly monographic journal, its value, at so moderate a charge per annum, should lead every practitioner in the country to become an annual subscriber. We have given in full the titles of so many of these issues, in order that our readers may get an idea of the very practical character of the subjects selected and of the eminent character in general of each of the authors.

Treatise on the Diseases of Women By ALEXANDER J. C. SKENE, M. D., Professor of Gynæcology in Long Island College Hospital, Brooklyn, N. Y., etc. *Second Edition, Revised and Enlarged, with 251 Engravings and 9 Chromo-Lithographs.* New York: D. Appleton & Co. 1892. Large 8vo. Cloth. (Sold only by Subscription through the Publishers.)

This is a most excellent text-book—well written by an able scholar and a gynæcologist of large observation, experience, and study. It is scientific enough to educate the student, and practical enough to be adopted by the general practitioner as his gynæcological work for reference, etc. To the specialist in gynæcology, this is an almost indispensable authority. Dr. Skene has availed himself of the opportunity presented, in getting out this second edition, to

make a thorough revision of the former edition, and has added much new matter that makes the work adapted to the wants of the doctor who is seeking the very latest information. In typography, the work is finely done; but it would be well to correct the typographical error on page 781 of locating the late Dr. Henry F. Campbell in Virginia. He was a Georgian—residing most of his eventful life as a surgeon in Augusta.

Manual of Autopsies, Designed for the Use of Hospitals for the Insane and Other Public Institutions. By J. W. BLACKBURN, M. D., Pathologist to the Government Hospital for the Insane, Washington, D. C. Illustrated. Philadelphia: P. Blakiston, Son & Co. 1892. Cloth. 8vo. Pp. 84 + 14 pages containing Illustrations. (From Publishers.)

This is a most valuable guide-book for practitioners who may be called on to make post-mortem examinations—especially in cases of brain diseases. It is prepared in response to a request from the Association of Medical Superintendents of American Institutions for the Insane, and the book, as now presented, has the official endorsement of that Association. The work is divided essentially into two parts—one describing the method of making and recording autopsies, and the other is devoted to the description of methods for hardening tissues for microscopical examination.

Editorial.

Medical Society of Virginia.

The Twenty-Third Annual Session of this State Society will convene at Alleghany Springs, Va., at 7:30 P. M., September 13th, 1892. It promises to be a session of more than the usual run of interest of State Societies. The Announcement, now being prepared for issue, among other things, states that a number of distinguished visitors will attend, with papers, etc. Among these, we notice the promised attendance and papers by Dr. Joseph Price, of Philadelphia, Pa., on "Surgical Management of Fibroid Tumors of the Uterus;" Dr. A. Vander Veer, of Albany, N. Y., on "Uterine Hæmorrhage, and Present Methods of Treatment;" Dr. G. Betton Massey, on "Modern Electrical Methods a Substitute for Surgery in Certain Pelvic Affections;" Dr. Irving C. Rosse, of Washington, D. C., on "Sexual Hypochondriasis

and Perversions of Genesic Instinct;" Dr. Samuel J. Fort, of Ellicott City, Md., on "What Shall be Done with the Imbecile?" etc. Of papers by Fellows of the Society, the following are among those to be presented: Dr. Wm. Edward McGuire, of Richmond, Va., on "Appendicitis;" Dr. R. S. Martin, of Stuart, Va., on "Laparotomy and the Good Accomplished by it in Gynæcology;" Dr. Smelt W. Dickinson, of Marion, Va., on "Some Old Ideas Revived;" Dr. L. H. Keller, of Luray, Va., on "Necessity of Prompt Action in Cases of Placenta Prævia, with Report of Cases;" Dr. Philip Taylor, of Richmond, Va., on "Some Ocular Diseases in Children;" Dr. Chas. W. Gleaves, on "Mysteries in Medicine;" Dr. M. W. O'Brien, of Alexandria, Va., on "Injuries of the Knee: their Treatment and Results, with Special Reference to the Prevention and Cure of Suppurative Action in and About the Joint;" Dr. Chas. M. Blackford, of Lynchburg, Va., on "The Causative Relations of Bacteria to Disease," etc. The subject for General Discussion is "Vertigo"—Dr. E. T. Brady, of Marion, Va., Leader. In addition to the above instructive and interesting subjects of papers to be presented, the Dr. Hunter McGuire Prize Essay on "Tetanus"—should any of those offered in competition be deemed worthy of the Prize by the Committee now appointed to examine into their merits—will be presented. The Announcement of the subjects of papers, etc., to be read is made so long (over a month) in advance of the meeting in order to allow the doctors who may attend time to examine into the subjects for themselves, and thus be ready to enter upon the discussion of any of the papers. It is to be hoped that full discussions of papers read will be a special feature of the session.

Board of World's Fair Managers of Virginia.

"The World's Fair Association has been authorized, under an Act of the Legislature, and its purpose is to have an exhibit of the material, scientific, literary, and archæological resources of Virginia, evidences of her past history from its earliest date, and all that pertains to her growth and development.

The Board of Managers have determined to reproduce the old mansion with its dependencies at Mt. Vernon on a plat of ground set apart for this purpose at Chicago.

The Legislature appropriated \$25,000 to do \$100,000 worth of work—work such as should be done to put Virginia at the great convocation of men and nations in commemora-

tion of the greatest event of the world, save that of the introduction of the Christian religion. We look to other sources for supplementing this sum, however, and we have the cities and towns, counties, schools and colleges, and all organized industries, boards of trade, real estate exchange, etc., to draw from, besides private individuals whose patriotism may be called into account, and who will give something.

There has been also organized a department known as the Mt. Vernon Memorial Association; and certificates of membership will cost one dollar each. We hope to sell many of these, and help some."

If Virginia doctors have anything they can exhibit, inform Dr. John S. Apperson, Executive Business Commissioner, of the Board of World's Fair Managers of Virginia, 1103 East Main Street, Richmond, Va., and he will see that space for it is provided for.

Dr. C. W. P. Brock, of Richmond Va.,

Was the recipient of the highest and a most deserved compliment during the session of National Association of Railway Surgeons during its session at Old Point Comfort, Va., in being unanimously elected as its President for the current term. This Association numbers among its membership many of the most eminent of American Surgeons. As the successor in office of Dr. Nicholas Senn, under whose Presidency the Association made wonderful progress, and brought out numerous papers and discussions of great practical value, it is safe to predict that none of the interests of the Association, nor of American Surgery, will be lessened during the term of Dr. Brock. A trained organizer, an experienced surgeon, and a man of genial nature, he will make friends for the organization, and so conduct its affairs, as to bring out able papers from the ablest of surgeons as contributions to the success of the May meeting of 1893, to be held in Omaha, Neb.

Dr. L. McLain Tiffany, of Baltimore, Md.,

Has been appointed Surgeon-in-Chief of the Baltimore and Ohio Railway System. His eminence in the profession makes this appointment a very influential one in overcoming objections still held by a few to "regular" doctors holding such positions. He is a member of the American Medical Association, and is widely known as the distinguished Professor of Surgery in the University of Maryland.

Dr. Joseph Price's Prize of One Hundred Dollars.

Dr. Joseph Price, of Philadelphia, Pa., pays the Medical Society of Virginia a special compliment in offering a Prize of One Hundred Dollars, to be awarded the Fellow of the said Society who may present, during the session of 1893, the best of the worthy essays on "The History of Surgery and Surgeons in Virginia." Dr. Price, as is generally known, is a Virginian by birth, and adds this to his many former expressions of inborn love for his native State and esteem of her professional renown. The Essays offered in competition are to be dealt with, in all respects, as are the Essays offered for the Dr. Hunter McGuire Annual Prize. Fuller announcement will be made during the session of the Society, at Alleghany Springs next month, with reference to this Prize offer for the session of 1893.

Off for Europe.

Drs. Hunter McGuire, Charles M. Shields, and Louis C. Boshier, of Richmond, Va., have just started on a trip to Europe. Drs. Shields and Boshier sailed about July 20th, and Dr. McGuire will leave New York August 3rd, in company with Mr. Lewis Ginter. Both parties expect to return about the middle of September. Dr. Phillip Taylor and wife, of Richmond, went in June, to return also in September.

Southern Medical College Building.

The corner-stone of the new building in Atlanta, Ga., was laid June 28th. Dr. T. S. Powell, President of the Board of Trustees, and the founder of the College some thirteen years ago, delivered the oration. The building will be ready for the session to begin October, 1892, and is in front of Grady Hospital, from which the Faculty will derive clinical material. The amphitheatre will accommodate over three hundred students.

Prescription for Itching in Scarlet Fever.

St. Phillippe (*Rev. Mens. de Mal. du Lienf.*, February, 1890,) says the best application for the relief of this itching, or almost any other, is—

Ry—Campho-phenique..... $\frac{3}{4}$ ss

Albolene unguenet..... $\frac{3}{4}$ jss

M—Sig. Apply night and morning.

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Original Communications.

ART. I.—The Treatment of Chronic Endometritis by Dilatation, Curettage and Packing with Iodoform Gauze, and Its Wide Application to Allied Conditions.*

By J. RIDDLE GOFFE, M. D., of New York, N. Y.

LECTURER IN GYNÆCOLOGY IN NEW YORK POLYCLINIC.

The dangers attending any interference with the interior of the uterus have been so forcibly presented and been so real that one does not wonder that the profession has stood in awe of any surgical invasion of that mysterious cavity. Apparently without any efficient cause, in the hands of us all, there have occurred cases of sharp peritonitis following the simple passage of the sound into the uterus, or a gentle dilatation of the cervix, till out of sheer dread of these dire consequences we had begun to pass the uterus by and give our attention to the periuterine inflammations as the seat of all the trouble. But the septic theory of inflammation has shed a new light on the pathology of these pelvic affections, and we now recognize the uterus as the focus from which emanate, not only many aggravating symptoms, but also most of the more serious pathological conditions of the pelvic organs.

Hand in hand with this new pathology has come the ap-

*Read before the North Texas Medical Association, June 21st, 1892.

propriate treatment, and cases of chronic endometritis that have long been the *bête noir* of the general practitioner, and, indeed, the opprobrium of the specialist can now be met with the assurance of a prompt and complete cure.

Omitting any extended remarks upon the symptoms, the diagnosis, or the pathology of endometritis, let me come at once to this new treatment. The principles upon which the treatment is based are two: 1st, complete removal of the diseased tissue; 2d, thorough drainage. The first is accomplished by means of the sharp curette after dilating the os internum, and the second by packing the uterine cavity with iodoform gauze.

The success of this little operative procedure depends so much upon the thoroughness of the asepsis, and attention to details as well as the technique, that the clearest account of it will be gained by describing the different steps as they proceed in an actual case.

The patient, anæsthetized, is placed in the lithotomy position on a Kelly pad. The external parts, the vulva and the vagina, are thoroughly scrubbed with soap and hot water—a fresh nail-brush being used on all the parts named; only occasionally do I find it necessary to shave the parts. From a fountain syringe, these parts are then doused with hot solution of bichloride, $\frac{1}{5000}$ th. A Sims' speculum is now introduced, and gentle pressure made upon it by the hand of an assistant. The anterior lip of cervix is seized with a volsellum forceps, and the uterus drawn down as near to the vulva as possible without too great traction.

The steel dilator is now passed through the internal os, and the cervix dilated to the extent of one-half inch—not by one sudden, forcible, steady pressure, but by repeated pressure and relaxation, as nature dilates the cervix, and consuming ten, fifteen or twenty minutes, according to the amount of rigidity of the tissue. Polk's cervical tube is passed into the cervix beyond the internal os, and through this the interior of the uterus is irrigated with the bichloride solution $\frac{1}{5000}$ th. The tube is removed, the uterus held

firmly by the volsellum forceps, and the entire endometrium is scraped away with the Sims' sharp curette. This must be done thoroughly. The ducts and glands of the mucosa are the lurking places of the disease, and must be removed to effect a cure; especially thorough work must be done in either horn of the uterus. Scrape till "hard pan" is reached, and the curette gives a grating sound, what the French call the "uterine cry." There is no danger in this if pressure is applied only with the drawing motion of the curette. The tube is again passed, and through it the uterine cavity is again douched with the bichloride solution. The douche tube must be small enough to pass to the fundus, and allow free exit of the water around it. A female silver catheter, or a simple glass tube four or five inches long is best; either can be boiled and made aseptic.

With the cervical tube still in place, the uterus is packed with a strip of ten per cent. iodoform gauze, one and one-half inches wide and two feet long. That is about the amount that can usually be gotten in, leaving the end projecting from the external os. The cavity of the uterus is simply filled with the gauze without undue pressure, passing it first into one horn and then into the other. This can be done with a stiff probe or sound, but the best instrument is the Sims tampon screw. A piece of gauze placed in the vagina to carry the drainage to the vulva completes the dressing, and the patient is put to bed for a week. Before introducing the gauze, my custom is to dip it into the bichloride solution $\frac{1}{5000}$ th, and squeeze it out. This moistens it sufficiently to render it ready to take up the drainage at once, and at the same time renders it more thoroughly aseptic.

The after-treatment consists simply in rest in bed with proper attention to the general functions of the body. There will be a slightly stained serous discharge for several days, and a certain amount of uterine contraction pains. As a rule, the latter are not severe, and demand no anodyne. The gymnastics that the uterus gets in its effort to expel the gauze are most beneficial to its muscular fibre and to its

circulation. Sometimes the gauze will be entirely expelled from the uterine cavity by the fourth or fifth day. At any rate, it should be removed at the end of that time, and vaginal douches given twice each day as long as there is any discharge.

I know of only one case in which uterine colic following this treatment was severe, and then the gauze was expelled in three or four hours.

This treatment has met with such success and such cordial endorsement on every hand that I do not deem it necessary to go into the detailed history of cases. It needs only to be known to be tried and adopted. It is remarkably free from danger. In not a single instance have I seen any serious symptoms following the procedure, nor have I known of any in the hands of other men. In one or two instances the temperature has gone to 101° , but has disappeared at once on the use of a saline cathartic.

This immunity from danger is due to careful asepsis and thoroughness of the work. All previous methods of treatment in our efforts to relieve can be characterized as simply meddlesome interference with a septic organ. We were playing with fire. Just enough was done in many cases to awaken a slumbering process to an active inflammation. And the latter state of that patient was worse than the first. But by the thorough removal of the diseased tissue, and the depletion of the congested blood-vessels in the adjacent parts by drainage, all danger is obviated, and the desired object is accomplished, viz., a healthy membrane takes the place of a hopelessly diseased one, the uterus is restored to a proper state of involution, and the pelvic circulation stimulated to healthy activity.

The honor of adding this treatment to our surgical armamentarium belongs to no single individual. It has been a growth with the advancing progress of the times. In France a method has been long in vogue of tamponing the interior of the uterus with small cotton balls. Fritzsche, of Germany, suggested the use of iodoform gauze; Professor Wylie, of New York, has long advocated the importance of

securing drainage to the interior of the uterus by dilating the cervix and inserting hard rubber drainage-tube; but to Prof. Polk is due the credit of combining these suggestions into a systematic plan, and presenting it to the profession in the method I here endeavor to describe.

But not only is this applicable to endometritis in cases presenting a large, retroverted, subinvolted uterus. The dysmenorrhœa and sterility of young married women is due frequently to an endometritis engendered by the constricted os uteri, and the consequent lack of drainage. This treatment gives prompt and complete relief. Within the past two months, I have applied it also with marked benefit for the relief of dysmenorrhœa and ovarian irritation in a young unmarried woman, the daughter of a physician.

But in no class of cases is its application more appropriate than in cases of incomplete abortion, where the whole or part of the placenta is retained. The uterus is thus cleared of all detritus, which is so apt to become a nidus for septic infection, while the presence of the gauze favors in every way the restoration of the uterus to its normal condition. Many cases could be cited, both in the early stages and in delayed and neglected conditions, where septic infection had already begun its deadly work, and in all of these the treatment has met the indications perfectly.

Cases of puerperal septicæmia also find in this their most efficient treatment. The constant or frequent irrigation of the interior of the uterus, while it gave satisfactory results in the majority of cases, was very annoying and exhausting to the patient, and required the constant attention of the physician. It is my custom now in all actual or suspected cases of puerperal septicæmia to put the patient at once upon the table, and after thorough antiseptic ablutions and douches, to explore the interior of the uterus with the sharp curette (the dull curette only bruises the tissue and so hastens absorption; I never use the blunt curette.) If I find any signs of trouble, indicated by foul odor or disintegrated blood clots or membranes, I scrape the entire surface with the sharp curette, wash out thoroughly, and pack with

sufficient iodoform gauze to fill the entire uterine cavity. The end of the gauze is left projecting from the external os, and a strip, packed loosely in the vagina, carries the drainage to the vulva. I rest confident in my mind then that no further local interference will be necessary, except, perhaps, to change the gauze at the expiration of three or four days.

Dr. Polk recommends and uses this treatment as a conservative procedure in cases of salpingitis. In many instances he has found it successful in opening the uterine end of the Fallopian tube, and thus affording drainage. In others it has had a revulsive effect upon the uterine appendages, and relieved all symptoms without further operative procedure.

From my experience in its application to this class of cases, I infer that the number it relieves is limited to those in which the actual disease is confined to the uterus, and the tubal and ovarian irritation are only symptomatic. Further experience in this direction may give more confidence in its efficacy. Recognizing the fact that the uterus is the continuing seat of the disease whenever it has extended to the appendages, renders the application of this treatment to the uterus most appropriate in any event. It is my conviction that the numerous cases in which we find the symptoms of pain continuing after the patient has submitted to ablation of the appendages, can be explained by the fact that the original endometritis still persists. Acting upon this theory, it has become my routine custom to subject all my laparotomy cases to curettage, previous to opening the abdomen, but at the same sitting. The result is that my patients are invariably freed from all symptoms upon recovering from the laparotomy.

The cases above referred to are those we recognize as chronic in character, and even these seemed beyond the pale of such interference, attended, as they were, with peri-uterine inflammation. But other operators, notably Dr. Pryor and Dr. King, have dared still more. They have put cases on record of gonorrhœal endometritis and salpingitis in its most acute and virulent form, in which they

have applied this treatment with marked relief, and saving benefit.

The pathological principle upon which the application of the treatment to all this class of cases is based, is that the uterus is the abiding place, the focus, whence the disease spreads to the tubes and ovaries. And the true principle of surgery is to attack the disease at its source.

Without going into unnecessary details, I trust you will bear with me, while I refer to a case of mine that is already on record, which is typical of another class of cases, in which this treatment is applicable. This is a case of *persistent vomiting of pregnancy*, in which it became necessary to produce abortion. By means of constant rest in bed, careful diet, and appropriate medication, I had succeeded in carrying the patient along almost to the completion of the third month, when it became apparent that further persistence was of no avail. I therefore anæsthetized the patient, and within the limit of forty minutes, dilated the cervix with the steel dilator, emptied the uterus of fœtus and placenta, by means of the sharp curette, and after douching with bichloride solution $\frac{1}{1000}$, packed in the regular way with iodoform gauze. Vomiting ceased promptly upon recovery from the anæsthetic, and the convalescence was uninterrupted. The delay and uncertainty of other methods is very trying to physician and patient; and in many cases of extreme exhaustion, the saving of a few hours is of vital importance.

The object of my paper has been to help in bringing to the profession, as widely as possible, a safe and efficient treatment in a wide range of cases. The safety and efficiency both lie in the thoroughness with which every step is executed, from the cleansing of the field of operation, and, indeed, the physician himself, to the placing of the last piece of gauze.

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22 East 35th Street.

ART. II.—Medical Logic—Some Popular Nonsense about Malaria, Bacteria, etc., as Etiological Factors.

By L. B. ANDERSON, M. D., of Norfolk, Va.

For years all the reasoning, conclusions and practice of of medical authors and teachers, in regard to the etiology of so-called "autumnal fevers," have been based upon the hypothesis that they are caused by a veritable *entity* denominated "*malaria*." Boldly affirmed ages ago, assumed as a fact, and accepted as a demonstration, we find all along the line of medical history (I will not say progress), that to this merely hypothetical entity have been attributed nearly all diseases of tidewater countries, embracing fevers of every type, dysenteries, rheumatisms, neuralgias, and even catarrhs and pneumonias. And yet there is not one fact to sustain the assumption. While there are factors to be found, more uniformly, in low, wet countries, for the production of fevers, in seasons of long drought and intense heat, such fevers are as prevalent in the dry, hilly and sandy regions as elsewhere, or anywhere. Nor do such fevers abound in many of the low, marshy sections, where all the agents for the generation of this supposed entity superabundantly abound. Nor is the assumption sustained, or even rendered problematical, by analogy.

All known entities, which produce in the human system specific effects, bear their own characteristics, and impart their etiological effects uniformly and invariably. The existence of these factors, which cannot be detected with absolute certainty by chemical analysis or microscopical vision, are clearly established and differentiated by the removal of the ptomainic virus from the infected, and introducing it into a healthy subject, wherein it reproduces itself with absolute and unvarying pathological results; whereas the hypothetical so-called "*malaria*" has never been known to produce any such effects, nor has the most scrutinizing chemical analysis, nor the most minute or elaborate microscopical investigation discovered its existence. Simply because certain fevers, and, if you please, other diseases, more

generally prevail in low, wet countries, it has been affirmed that such localities generate a specific entity called malaria, which is their etiological factor—ignoring the while all those etiological factors which are known to impair the vital functions, prostrate the nervous centres, thereby loading the system with vitiated matters, which, passing into fermentation or putrefaction, eliminate leucomaines, which overwhelm with their poisonous potency all the animal powers, derange the vital balance, and produce discord, derangement and disease in all the animal economy.

A word as to these etiological factors. We have learned to recognize the power of electricity, not only in the great dynamics of nature, but in its influence as well over the animal functions. The earth is negatively electrified. Whatever is brought near to it, positively electrified, is attracted to it, until its own electricity is equalized, when it, with all other minute and mobile objects, are repelled. Here we have an explanation of the rapid rising of aqueous vapors. So soon as its particles are saturated with negative electricity, they are expelled, and are borne into the upper ether, where they are retained by this repulsive force, until they are rendered positively electrified by the sun's rays, when they begin to attract each other and form clouds. These again are attracted by the negative electricity of the earth, when the intercurrent streams passing to each other produce electrical storms. When, however, the rising vapor is ascending, it obstructs the positive electricity from all surrounding objects and draws off the negative electricity, and thus deprives, for instance, the animal economy of its normal supply, when it experiences the languor, prostration and *malaise*, resulting from the absence of such an essential stimulus. This is demonstrated by the pains which frequently invade the system, especially of those who are neuralgic or rheumatic, and the torpid liver or indigestion, which precede a storm. This process is going on more actively and persistently in lands saturated with water than elsewhere, as is clearly demonstrated *a priori*.

In like manner, in the midst of a long, heated, dry sea-

son, the electrical and thermometrical changes which occur in the diurnal round, enfeeble the nervous centres, prostrate the vital energies, impair the secretions, and render the system a prey to the effects of any unusual draft upon its energies. In either case, any physical shock, indigestible food, constipation, or diarrhœa or active purge, parturition, over-exertion, and many other agencies, will destroy the balance of the nervous and vascular systems, filling the *prima via* with vitiated matters, which rapidly pass into decomposition, generating volumes of leucomaines, which, according to their nature and virulence, will produce the greatest discord, derangement, disorder and diseased action. These developments are constantly witnessed under the circumstances and conditions mentioned, all of which can be traced to ostensible, rational and demonstrable factors, without groping in conjectural darkness after the hypothetical, mythical malaria.

And yet the medical mind is constantly wearied and exhausted by the changes which are rung in all our books and journals upon this ghostly nonentity. Nor in the thousands of pages which have been written upon malaria, can one sound, rational, logical argument be found to establish the existence of such an etiological entity. Let us, then, cease to grope in this superstitious darkness any longer, or try to conceal our ignorance of physics, physiology, pathology and etiology, by claiming as an etiological factor a mere figment of the imagination, which has never been demonstrated to exist by one single argument worthy the appellation of medical logic.

Another craze which has taken fast hold upon the human mind is the *microbic or bacterial origin of disease*—a theory which gained notoriety simply from the bold, defiant and persistent declarations of its projectors, and the blind, unjustifiable, unquestioning and servile acquiescence of its advocates.

The basis of it is this: Bacteria, the generic name for all vegetable microbes, are purely vegetable, "and are subject to the same laws which govern the higher orders of vegeta-

ble life." Their cocci or seeds or spores are found wherever the waters flow, the land is found, or the wind blows. They only need a suitable soil to spring into life and growth, and produce disease and death, wherever vegetable or animal life exist. They propagate with a celerity and abundance which is amazing, and beyond all mathematical computation. They are known to produce anthrax, hydrophobia, cholera, typhoid fever, and even *autumnal fevers*; and this, too, in the teeth of the myriads who affirm that malaria is their factor. Indeed, the progressives, progressionists and new lights which have recently appeared in the medical firmament, declare that bacteria are really the cause of all diseases—each disease having its specific bacillus.

If it be true that all diseases spring from bacilli, then bacilli must produce a soil suitable for their germination and growth, or the normal tissues of the human system constitute such a soil. If they do, then no human being can be exempt from the ravages of these microbes, for they are found in the form of spores everywhere. If the normal tissues be a suitable soil for their growth, since they spring into life by billions in a day, it is self-evident that under such a state of things not a living being could exist on the face of the earth for twenty-four hours. If, however, they can only propagate in a soil already prepared for them, it is apparent that they are not the cause of all disease, for only diseased fluids or tissues constitute such a soil. If, as is invariably admitted, microbes can germinate, or their initial plants can only grow in fermenting or putrescent organic matter, then only from such matters can they derive their pabulum.

If, therefore, from such pabulum can they only subsist, when all such pabulum is consumed, they must wilt and die. On the other hand, if they do not germinate in, or subsist on healthy animal tissues or fluids, it is evident they can never be etiological factors. Instead, therefore, of being etiological factors, they are only designed to consume the morbid accumulations resulting from perverted formations, and arrest the generation of leucomaines and ptomaines,

which are the factors of most of the alarming developments in the progress of inflammations and fevers.

That there are a variety of organic alkaloids developed in the accompanying secretions in a variety of diseases is admitted—each variety of alkaloids constituting a soil for its specific microbe and bacillus. This, from analogy, might have been inferred. For in our forests, fruits, cereals, and vegetables, we find that certain plants, etc., will only grow in certain soils, and when the peculiar constituents adapted to their growth have been consumed, they wither and die. Nor can any plant prepare a soil for its own growth. When, however, a soil cannot produce a certain growth because of the absence of certain organic constituents essential to the development of that growth, when that element is supplied, the discordant elements are harmonized, and a fruitful soil is produced. Thus, when bacteria are placed in a soil devoid of fermenting or putrescent organic matter, they speedily die; but let a minute particle of such matter be introduced into a pure soil, it at once contaminates and transforms the particles of that soil into the matter like unto itself, and the circle widens until the whole is contaminated, and swarms with bacteria. So soon, however, as all the putrescent matter is consumed, the bacteria die, and are thrown off by the bowels and kidneys.

As it is impossible for bacterial germs to incubate, or bacteria to live except in decayed organic matter, so it is impossible for them under any circumstances to become etiological factors. And yet, because they are found in the debris from various diseases, instead of recognizing them as a rational and demonstrable offspring of such pathological excreta, they are illogically assumed to be their cause. So infatuated, even, are some men with this delusion that they have established chairs or professorships in certain schools specially to teach this nonsense. Surely it is time to return from the errors of our ways, and cease to grope in the mythological medical disclosures of the priests of Isis. Logical conclusions, deduced from established facts, constitute the only reliable basis of philosophical medicine.

To reason upon conjectures or assumptions, and deduce conclusions from such premises, must ever result in error in etiology, pathology and practice. Because microbes are found in the putrid discharges of various diseases, as buzzards are found infesting a deserted battle-field, or maggots an offensive ulcer, it is no wiser or more philosophical to assign to the first the cause of the putridity, than to the latter two the slaughter or the ulceration.

In a volume recently issued from the press, and most highly commended by many medical journals, "inflammation is affirmed to be a sanative process and not a disease, and hence an effort of nature to arrest the ravages of disease." So stupid, nonsensical and idiotic is the declaration, to make it is to destroy it. Ah! Mr. Editor, instead of rising higher every day upon the plane of a sound philosophy, the self-assumed and stupidly-accredited leaders of medical thought are to-day bedraggling their garments in the meconium of the nascent offspring of Æsculapius! Alas! Alas!!

ART. III.—Boracic Acid—An Aid in Diagnosing Minute Tympanic Perforations.

By J HARRIS PIERPONT, M. D., of Pensacola, Fla.,

EX-PRESIDENT FLORIDA MEDICAL ASSOCIATION, ETC.

Recognizing, in the first place, the great difficulty of making a positive diagnosis of small perforations of the tympanic membrane, and, secondly, the almost impossible use of the usual methods—particularly with children—a ready means of diagnosis will be generally appreciated. This may be found in the use of finely-powdered boracic acid. The external ear being thoroughly cleansed and dried, the acid is blown against the tympanum until uniformly coated. An examination a few hours afterwards will reveal a perforation—if one exists—by a black or discolored spot appearing upon the white field. The secretions passing through the opening will either dissolve the powder or merely discolor it—being influenced by the relative amount of fluid secreted and powder used.

ART. IV.—**Mechanical Treatment of Trachoma.***By **EDWARD JACKSON, M. D.**, of Philadelphia, Pa.,PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC, SURGEON TO
WILLS EYE HOSPITAL, ETC

The importance and dangers of trachoma, or true granular conjunctivitis, as a cause of suffering and blindness, and its spread by contagion, were well presented by Dr. J. A. Lippincott, in the Address on Ophthalmology, last year. An important factor in its transmission is its extremely chronic course. I have in mind a case which I saw and treated from time to time for ten years, the patient attending for a time, then getting weary and neglecting treatment for awhile, and anon returning, each time with the cornea distinctly more damaged; and during the whole of this period this patient was a possible centre of infection to those about her. And such cases are not exceptional, but extremely common.

It is rather exceptional to have a patient persevere steadily with treatment until the cure is complete. Last year I remember but a single case in my service at Wills Hospital who persisted steadily to the end, coming much of the time three times a week for applications of copper sulphate, and who was finally discharged completely cured just about a year after the treatment was commenced. There is still attending my service at the Polyclinic Hospital, for occasional applications, a girl who has been under pretty steady treatment with astringents for four years; and who is now about cured, with some shrinkage of the conjunctiva. And during these protracted periods we have to deal, not with sequellæ, but with the active disease running its characteristic course. I cannot recall seeing a case of well-marked trachoma, even when taken early, that was thoroughly cured by applications of copper, alum, silver, and tannin in less than three months. Yet such treatment has been, and still is, mainly relied on for the radical cure of this disease.

*Read before the Medical Society of the State of Pennsylvania, 1892.

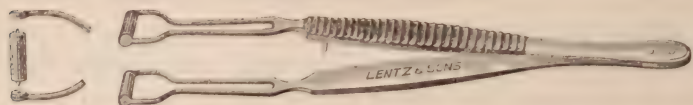
In contradistinction to this, attention should be called to the results of mechanical treatment. Many attempts have been made in this direction, such as incising the trachoma granules—the little sago-like and gray translucent masses that crowd the retro-tarsal fold, and are scattered over the palpebral portion of the conjunctiva. Others have excised them, sometimes removing the whole retro-tarsal fold—greatly abridging the course of the disease, but also leaving a contracted conjunctival sac.

Others, led by Manolescu, had resorted to grattage, or brossage—scraping the whole conjunctival surface, or brushing it with a tooth-brush, the bristles of which were cut short to stiffen them, with or without the application of strong solutions of mercuric chloride. This latter method, if thoroughly applied, is effective in promptly cutting short the disease; but leaves such cicatricial contraction of the lids that its adoption seems scarcely justifiable.

In 1886, Dr. F. C. Hotz published his method of expression, which it is since claimed had also been practiced many years before by Sir William Wilde and others. He pressed out the granulations from the upper lid and cul-de-sac with the thumb-nail, and from the lower lid by the aid of iris forceps, from which the corrugations had been ground off. This operation, he urged, could be done without a general anæsthetic; and he claimed that it greatly shortened the treatment of the most tedious cases, those with well-marked trachoma granules. I tried it, as did doubtless many others, under cocaine anæsthesia, and, probably on account of failure to thoroughly express the contents of the granules, was not very much impressed by the method. Others, notably Drs. A. E. Prince and H. D. Noyes, devised forms of forceps for the operation, and practiced it with greater success.

Something over a year ago, Dr. H. Knapp resorted to the roller principle, such as is applied in the common mangle or clothes wringer, to the expression of the trachoma granules, and devised a pair of roller forceps (see cut) for the purpose. His results were extremely satisfactory, the mass

of cases being cured by a single operation, often without necessity for subsequent treatment, and without cicatrices due to the operation. He reported them at the meeting of the American Ophthalmological Society last September, and



they have been so far confirmed in the experience of others who have tried the method that it should be adopted for all suitable cases.

The method of performing the operation of expression with this instrument is as follows:

The patient being fully etherized, one of the lids is everted. In everting the upper lid, I fold over the tarsal portion in the usual method of everting the lid, then seize the folded margin and withdraw it from the globe, at the same time everting it and fully exposing the upper cul-de-sac of the conjunctiva. The forceps are then thrust well into the cul-de-sac, and as large a fold of the conjunctiva as possible is firmly grasped between the rolls. Firm pressure is then made and the rolls steadily withdrawn. As this is done the material composing the trachoma granules in the portion of the conjunctiva so grasped is seen to ooze out from the tissues on the rolls until the fold escapes from the forceps freed of this morbid material. A second portion of the conjunctiva is then grasped and similarly stripped, and this is repeated throughout the conjunctival tract.

Especial care is to be given to the thorough cleansing of the parts of the membrane in the vicinity of the commissures, this being the most difficult part of the operation. The squeezing of the portion of the membrane lining the tarsal portion of the lids near their free margin is best accomplished by placing one roll on the conjunctival, and one roll on the dermal surface of the lid, and drawing them up to the free margin of the lid.

In this way every portion of the conjunctiva is to be gone

over two or three times until no more of the morbid exudate can be squeezed out. The conjunctiva is then to be cleansed of blood and exudate, and the after-treatment is to be directed to prevent undue reaction at first, and subsequently to prevent relapses.

The effect of this operation is at first to cause œdema and swelling of the lids, which gradually subside, leaving the favorable cases cured, with no more cicatricial contraction than was present when this treatment was resorted to. Indeed, in those cases in which there has occurred very marked cicatricial thickening and induration of the lid, the induration disappears entirely, and while there is later a tendency to its return, the ultimate result appears to be a very marked permanent benefit.

The amount of benefit, however, is in general proportioned to the amount of the characteristic exudate present in and beneath the conjunctiva. Where this is the leading feature of the case the cure is immediate, and, so far as I have been able to observe, permanent. But it is remarkable how much of this translucent jelly-like material can be pressed out of some thick indurated lids, that give very little evidence exteriorly of its presence.

In the favorable cases, those in which the granulations are well marked and the general induration and alteration of the deeper structures of the lid comparatively slight, a single rolling is sufficient. In the less favorable cases, those in which there is more induration and thickening, Dr. Knapp advises the free incision or scarification of the lid prior to rolling. In these cases, including the worst that I have encountered since resorting to this method of treatment, there was marked improvement after the operation, and it was repeated with still further improvement.

I have done the operation under cocaine anæsthesia, where the granulations were localized in a limited part of the conjunctiva, and the patient greatly preferred not to take ether. But the cases in which it is advisable to do it are quite exceptional, for without general anæsthesia the squeezing will not be thoroughly completed in every part of the conjunc-

tiva, and it is only the thorough expression that produces the cures, which seem truly marvelous when compared with the results of older methods of treatment.

A word about the selection of the instrument; the essential point is that it should roll easily. This is first to be tested by seizing with it the fold of skin between the fingers, and noting if the rolls properly turn under very light pressure, and do not slide over the surface without turning. To ascertain if their motion is uniform, grasp a piece of paper firmly between the rolls and pull it out while firm pressure is maintained. If then rolls are at all irregular in outline, or not properly centered, the movement will be found decidedly jerky instead of smooth and uniform, as it should be. In using the instrument, one must watch that it does not become clogged with blood and exudation, and cease to roll, simply dragging over the tissues, for this does not as effectually empty them of the trachomatous matter, and is liable to cause tearing of the conjunctiva.

The corrugated rolls were adopted by Dr. Knapp, I believe, for the purpose of more certainly securing their rotation. I have also used smooth rollers with which it is essential to have the bearings work with perfect smoothness, but which, when they work perfectly, we would expect to empty the tissues more completely and with less bruising. It may be questioned, however, if a certain amount of bruising, enough to secure the free outflow of serous exudate, practically washing out the trachomatous matter, as the tissue is gone over the second or third time, is not an important part of the treatment. So that on the whole the corrugated rollers are probably the better.

In conclusion, let me urge all who may have to deal with trachoma in its marked and characteristic manifestations, to put the patient under ether and roll the lids freely, squeezing out all the exudate possible, and going over the whole conjunctiva two or three times.

Do not fear the apparent violence done the tissues. If the rolls turn properly, you cannot tear the conjunctiva; you will preserve all the epithelial surface there is to start with,

and secure the minimum of cicatricial contraction. And in favorable cases a cure is accomplished by a single operation, sometimes without after-treatment.

ART. V.—Eye Enucleated—Secondary Hæmorrhage—Restoration of the Senses of Smell and Taste—Remarks.*

By E. P. BECTON, M. D., of Sulphur Springs, Texas.

On April 28th, 1891, I enucleated an eye for Wm. Baxter, Esq. The following history is given by Mr. Baxter:

"On the 8th of November, 1880 (I was then 30 years of age), I was accidentally kicked by a horse. The blow was received on the right side of the head, on and above the cheek bone, cutting into the eye socket on the outer side. Unconsciousness so closely followed the injury that I was not aware of my hurt until the fifth day after, when I found myself quite blind; the muscles of the face so paralyzed that, for about three weeks, when sight returned in a slight degree in the left eye, it was necessary to lift the eyelid with the finger to see at all. The right eye was sightless and remained so. The eye-ball gradually shrank to one-half its natural size. The attending physician, Dr. L. J. Graham, expected me to die the night after the injury.

"About seven weeks after the injury, I noticed a gradual decline in the senses of taste and smell. These defects finally became so positive that I could hardly distinguish the strongest odors, and was only aware of an agreeable degree of bitterness in quinine dissolved in water.

"Ten and one-half years after the date of the injury, I was attacked with sympathetic inflammation in the left eye. I consulted Dr. E. P. Becton, of Sulphur Springs, who advised the immediate removal of the injured eye. He performed the operation the next day, April 28th, 1891. I was able to leave my bed and walk down stairs on the second day after the operation, feeling quite well under the circumstances.

"On the fifth day, I walked to the barber shop and drug store, returned to the hotel, and, while sitting at the supper table, was attacked with a very severe hæmorrhage. Indeed, I thought for half an hour I might die, so great was

* Read before the North Texas Medical Association, Sherman, Texas, June 22nd, 1892.

the loss of blood. Upon the arrival of the doctor the hæmorrhage was checked, and, with good nursing, I recovered in a few days.

"On the next day after the hæmorrhage, my kind nurse laid a bunch of flowers on the pillow, near my face, and I was surprised to find that the sense of smell had returned, so I could enjoy the perfume almost as well as before the original injury.

"I also found the sense of taste surprisingly acute, and I enjoyed the food given me for breakfast as I had not done before since the date of the injury, all of which was very gratifying to me.

"I now (June 1st, 1892) still retain these restored faculties in a very perfect degree, and am quite comfortable, with the exception of a slight paralysis of the nerve extending from the eye up to the crown on the right side. This causes me some discomfort—especially when I remove the artificial eye I use. The artificial eye I find quite an advantage; it fills out the eyelids and protects the stump, to say nothing of the improvement in personal appearance resulting from its use. There is absolutely no discomfort from its use when I keep it perfectly clean.

"Should any one, suffering as I did, ask my advice, I would unhesitatingly say, have the injured eye cut out."

Such is the history of the case as given by the patient himself, and is in every particular true and correct. No one who knows Mr. Baxter will doubt anything he says. He is a Scotchman by birth, a lawyer by profession, and in all things a reliable, truthful gentleman.

The points of interest in this case are these:

1st. While delirious, what talking Mr. Baxter did was in the Scotch dialect. He was brought from Scotland to the United States when he was three years and four months old.

2nd. The secondary hæmorrhage. I have enucleated twenty-six eyes, and never before had a secondary hæmorrhage, nor have I found any mention of such an occurrence in any authority I have consulted, and I have examined a number. The hæmorrhage was promptly arrested in this case by packing the socket with borated cotton. The patient then fainted, and for a few moments his condition was alarming. Whiskey, hypodermics, hot applications to

the extremities, etc., etc., soon brought about reaction, and there was no further trouble. Dr. S. L. Gilbert and Dr. A. E. Garrett rendered me valuable assistance in the case.

3rd. The next point of interest, and the one most puzzling to me, is the restoration of the senses of smell and taste. Anosmia, as you know, is usually caused by lesions of the first cranial nerve, and is generally unilateral. In this case it was bilateral. I will here state that Mr. Baxter never had nasal catarrh. He states that he could appreciate odors only by "inhaling through the mouth." Ranney says "anosmia indicates the existence of a lesion situated in the anterior fossa of the cranium, or a destructive lesion of the cortex of the temporal bone near its apex." In the case of Mr. Baxter, if there had been localized pressure, temporary relief after the fearful hæmorrhage would not have been surprising. But the relief is permanent.

What is the explanation? I don't know. Taste may be lost or impaired by injury to the special nerves. To me this is an interesting case. Did the hæmorrhage restore the senses of smell and taste? If yes, how?

What pathological condition caused the loss of these? How were they restored?

I don't know, and report the case, hoping that some ophthalmologist or neurologist may throw light upon it.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

ART. VI.—Acute Rheumatic Conjunctivitis.

By JOHN DUNN, M. D., of Richmond, Va.,

CHIEF OF CLINIC OF THE RICHMOND EYE, EAR AND THROAT INFIRMARY.

CASE XI.*—Case of Rheumatic Conjunctivitis.

Betsy B., cook, age 53. May 1st, 1892, gave the following history: For several days her right eye has been inflamed and extremely painful; has suffered from severe pain about the orbit. Cooks over a hot stove, to which fact she attributes the condition of her eye. Examination of the eye: Pupil normal; iris responds to light, and dilates fully under atropia; media clear; vision normal; tension normal; coverings of the eye-ball and inner surface of the lids fiery red; eye very sensitive to light; secretion from the inflamed conjunctiva slight, in comparison with the amount of inflammation, and consisted chiefly of tears, with slight excess of mucus. No swelling of the lids or subconjunctival tissues, except just in the lower cul-de-sac, where the appearance presented was that commonly seen in mild forms of catarrhal conjunctivitis. No nose complication. No evidence of an episcleritis; eye-ball not sensitive on pressure.

For three weeks cold applications were made to the eye three times or more a day, while the more common forms of eye salves were prescribed. The eye was shaded from light. The patient gave up cooking. At the end of three weeks the condition of the eye was apparently the same as at the beginning. Local treatment had produced no effect. The patient had come more or less regularly to the Clinic, and had, I believe, made a fairly careful use of the remedies prescribed.

There was one point of interest—the pain in and about the eye; the eye, and especially the region above the eye, ached at times severely. As local remedies proved useless, inquiries into the patient's past health (to all appearances she was a healthy woman) revealed the fact that she was recovering from an attack of rheumatism when her eye began to get red and pain her. Salicylate of soda, 20 grains every three hours, was ordered. The eye, after a day or two, began to lose its inflamed appearance, and at the end of ten days was well.

*The numbering of these Cases refers to the order in which they are being selected for Report and Remarks from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

The case must be considered, I think, as one of *acute rheumatic conjunctivitis*. It had none of the appearances presented in an episcleritis or scleritis. The whole conjunctiva of the ball and lids was affected; it was not a limited inflammation, as we find in cases of episcleritis; nor was there any elevation of the tissues, as we often find at the seat of the inflammation in episcleritis. The cornea was not implicated, as is not infrequently the case in episcleritis.

Meyer makes no reference to acute conjunctivitis as a symptom of rheumatism; nor does Schmidt-Rimpler; nor do Wecker and Landolt in their *Traité Complet. d' Ophthalmologie*.

The trouble seems to be analogous to the acute pharyngitis, from which persons, having a rheumatic diathesis, at times suffer.

As diagnostic points, there are to be noted the severe orbital and periorbital neuralgia accompanying the inflammation, the watery look of the ball, the lack of swelling of the conjunctiva, the slight increase in secretion in proportion to the apparent severity of the inflammation, the failure of remedies usually efficient in the treatment of the common conjunctivitis, the appearance of the inflammation immediately after an attack of acute articular rheumatism.

ART. VII.—Dr. Joseph Price's Treatment of Laparotomy Patients—Substance of His Remarks Following an Operation.

By ANNE WALTER, of Holly Springs, Miss.

STUDENT OF MEDICINE IN WOMAN'S MEDICAL COLLEGE, ETC., PHILADELPHIA, PA.

Immediately on admission to the hospital, the patient is given a warm bath, her nails and head examined, and, if necessary, cleaned; she is then put to bed, and a bi-chloride douche given. A liquid diet of milk toast, beef tea, mutton or chicken broth is to be now her daily portion. Next and most important is the thorough evacuation of the alimentary tract by enemata and salines, two days being de-

voted to this purpose. He prefers one teaspoonful of Rochelle salts every hour until there has been free purgation. In some cases it is necessary to give one ounce of castor oil in sarsaparilla, which can be repeated if necessary; it is generally retained, and acts quickly and well. When the stomach rejects everything offered, do not irritate the patient by constantly repeated dosing, but confine yourself to enemata. A forced enema of two or three quarts of warm, slightly salt water, while the patient is turned upon her left side and caused to retain it as long as possible, will have the desired effect.

A bichloride of mercury douche, $\frac{1}{4000}$ th, and an alcohol bath are given both morning and evening. On the night before the operation and the morning of it, the abdomen is thoroughly rubbed with turpentine, and then with alcohol—especial attention being paid to the umbilicus and pubes, and bathing low down upon the thighs. Everything upon the bed is changed. A fresh bottom sheet is well tucked in; the mackintosh, wide enough to extend from the knees well up under the back, is pinned through the ticking. Over this the draw-sheet is separately pinned; then the top sheet, light blanket and white spread, with one pillow completes the toilet of the bed. Just before the anæsthetic enters the room, the patient's bladder is emptied, and her limbs wrapped lightly in a woollen blanket.

The ether is administered to her in bed, and in her own room, which is now converted into a temporary operating room. In it there is no furniture, save the bed, and into the room is brought the portable operating table, consisting of two wooden trestles and a long board. The latter is covered with a blanket, a mackintosh, and finally a sheet is pinned smoothly over all; a small table, upon which are the dressings and two galvanized or hard rubber trays for the instruments. In the larger one the scissors, scalpel, aneurism needle (threaded), and a glass tube are placed; the smaller tray holds six hæmostats; over the instruments pour hot water. A porcelain bon-bon box holds the ligatures and needles; a large table is used for pitchers, bowls,

irrigator, alcohol, cosmoline, etc. Under the operating table is placed a drugget and tub; upon the floor are the slop buckets, a *mixer* filled with distilled water ready for use, and a five gallon demijohn of cold distilled water. The walls and floor of the room have been previously scrubbed with bichloride solution. Military discipline is observed in every detail. A place for everything, and everything in its place is the law. To this is due the absence of all confusion. No talking and absolute quiet must be demanded. In preparing the patient, operator and assistant practice the gospel of cleanliness. Touch nothing which has not just been scalded, and at the last moment have the nurse tie on the operator's apron. Everything in abdominal surgery must be perfection itself.

For the removal of suppurating tubes and ovaries, and for ruptured tubal sac and clot in ectopic pregnancy, make the shortest possible incision, introduce the fingers or hand with the dorsal surface toward the hollow of the sacrum; break up adhesions, get your finger under the tube and let it *stay* there until the sac is shelled out. Introduce a silk ligature as near the uterus as possible, make a figure of eight, knot and tie back again. For bowel stitching, use pure, fine silk, and but little of it.

For cystoma and hard tumors, make the shortest possible incision, and in *all* cases must there be the least exposure and manipulations possible. Wash out the cavity thoroughly, making a bivalve speculum with the nozzle of your funnel between your first and middle fingers; carry this all through the cavity; have a good, strong, steady stream, using three or four pitchers of warm water, followed by a well placed drainage tube in Douglas' pouch, and a neatly closed incision. Over the incision place a piece of folded gauze and a pad of cotton and gauze; bandage with a three-tail bandage, leaving tube projecting from between the last two tails. Slip a six-inch square of rubber cloth over the tube; place in this cloth a small square of absorbent cotton; neatly pin the corners of the rubber cloth together over

this; cover the whole abdomen with a gauze towel, and your incision is dressed.

After the operation, the anæsthetizer lifting her shoulders, an assistant her hips, and the nurse her feet, she is placed in bed where, with a hot soapstone at her feet and on each side, she is warmly covered and left to the care of her nurses. The room is speedily cleared of everything suggestive of an operation.

The suffering from *flatulency*, immediately following the operation, is intense. Nothing can be done to directly ease the pain, but by constantly bathing the face, putting the hands in cold water, and allowing them to rinse the mouth frequently, every three minutes if they like, you can very appreciably alleviate their sufferings. Watch carefully and see that no water is swallowed; if they do this, and persist in doing so after you tell them the danger of causing or increasing nausea, it is well to withhold the water for a few minutes, when they quickly come to terms. If they are quiet, the blanket may be removed from the limbs in six or eight hours after the operation. Later, a pillow may be rolled and slipped under the knees; place your arm under the popliteal space, carefully lift the knees, while with your other hand slip the pillow underneath; this gives instant but temporary relief.

On the second day, if there is still much pain, and no flatus has been passed per rectum, an injection of warm soap water, with from one-half to one ounce of turpentine to the pint, is given. This always gives relief, but use at least two pints. If the patient cannot micturate after repeated trials, at the end of eight or ten hours use the catheter; after this every five hours. Sometimes it is necessary to catheterize for several days, but oftener only once or twice. Wash the genitalia thoroughly, scald the catheter, dip in alcohol and again scald, then anoint with cosmoline; every precaution is taken to prevent cystitis. The assisting nurse does all this. The nurse in charge of the case does nothing but care for the tube; before cleaning it she washes her hands with soap and water, using a nail-brush, then

alcohol. The pitcher, pan and syringe in use are scalded inside and out before and after using. Clean it as quickly as you can, exposing the patient as little and as short a time as possible, covering the chest and arms with a light blanket while the covers are turned down. The tube should be cleaned every half hour or twenty minutes for the first eight or ten hours, or at least as long as the tube is full and the liquid dark; then, according to the quantity and color of the fluid, the time may be lengthened to an hour, an hour and a half, and so on. When there is nothing in the tube, generally the third day, and has not been for several hours, except, perhaps, a few drops of a straw-colored fluid (serum), it may come out. Even in this case it is safer to insert a soft rubber tube, about six inches in length, in its place, and instruct the nurse to withdraw it at the next dressing if there is little or no discharge; or, better still, let her raise it, cut off an inch, and remove at the second dressing, after which the incision should be freshly dressed; inspect it morning and evening of the succeeding days, and dress if necessary. Keep the bandage tight and smooth over the abdomen and well down over the hips.

Should there be hæmorrhage during the first two or three days, you have your tube as a sentinel—the treatment for which, except when the second operation is called for, is to raise the foot of the bed, clean the tube until it is *absolutely dry* if it takes an hour, and *clean often*, remembering always that cleanliness is the power which is going to save your patient and bring you success.

The *pulse* is carefully watched. When more than one hundred, a hypodermic of strychnia, gr. $\frac{1}{50}$ th, is given; if over one hundred and twenty, give hypodermic of strychnia, gr. $\frac{1}{50}$ th, and digitalin, $\frac{1}{100}$ th, repeated every four hours; if it is exceedingly feeble and rapid, look out for hæmorrhage and give stimulants, rectal injections of whiskey, an ounce in half a cup of warm water or milk, every four hours. For *uterine hæmorrhage*, use the same preventive treatment. But when, in spite of your care, it cannot be avoided, keep the patient as quiet as possible, pack the va-

gina with tampons saturated with dilute acetic acid, and give ergot, gr. $\frac{1}{40}$ th, hypodermically. *After the appearance of the metrostaxis*, which usually occurs during the first twenty-four hours, or at least in the first three days, and after flatus has been passed, the patient is more comfortable, and you may feel safer about her. The duration of the metrostaxis varies from a day or two to a week or two; is sometimes intermittent, and generally varying in quantity. Begin the douches, boracic acid or bichloride solution, $\frac{1}{40}$ to $\frac{1}{90}$, as soon as the flow has ceased, or about the end of the first week, and continue them twice daily as long as she remains in the hospital. If there is *nausea*, keep hot flaxseed and mustard poultices over the stomach; if persistent, let the patient drink as much and as hot water as she can stand, thus washing out the stomach with very little retching, against which you should always guard. If the nausea is long continued, give broken doses of mercury. If there has been no nausea, and the patient shows no unfavorable symptom from the ether at the end of twenty-four hours, a tablespoonful of soda water (Seltzer) is given every twenty minutes; if this is retained in comfort, in a few hours give a tablespoonful of water, gradually increasing the quantity. The morning of the third day an after-dinner cup of coffee is allowed; later, a little beef tea or broth; no nausea resulting, buttermilk is given—a tablespoonful or two every hour and a half; watch the effect, and stop it if there is tendency toward nausea or diarrhœa.

The fourth day scalded toast, in addition to the beef tea and coffee; and *now* the nurse may turn her on her side, supporting her back with a pillow.

Begin the fifth day with two teaspoonfuls of Rochelle salts, followed by a breakfast, consisting of a delicate lamb chop, or a small morsel of rare tenderloin and a little toast; after this, in moderation for a day or two, she may eat the regular hospital fare, vegetables being withheld until the tenth day. *No sweet milk* is given unless scalded and on toast until the stomach has proved itself able to stand it, and then the precaution of adding a drachm of lime water

to every glass is taken. Beginning with the fifth day, open the bowels every day with salines or enemata.

On the eighth day, *remove the stitches* in the following manner: Lift both ends of the ligature, gently pull away from yourself until a portion of the buried suture is exposed; with your scissors cut this part of the gut and pull steadily toward yourself across the incision, and the stitches are removed with no discomfort to the patient. If left in longer than the eighth day, you will be apt to have stitch hole abscesses, suppuration around the gut. In this case, press the surface around the abscess, gently and firmly squeezing out the pus. If a large abscess forms, keep over it hot flax seed poultices, dress three times a day, and build up the general health.

For bowel obstruction, give two teaspoonfuls of Rochelle salts every hour, injections of warm soap water, and from a half to an ounce of turpentine; retain as long as possible, and repeat every hour. If there is nausea, and Rochelle salts cannot be retained, resort to liquorice powder, magnesia citrate, or anything which the stomach does not reject; poultice with flax seed and mustard. Persist faithfully in your treatment, never relaxing in your efforts to remove the obstruction.

Of peritonitis following an operation, I know nothing, except in a general way that it is "treated with salines."

For improper action of the kidneys, use *dry heat*, keep the patient as warm as possible, sustain the strength with rectal injections of whiskey every four hours, milk punches every two or three, and alcohol baths every four hours. Stimulate the heart with digitalin gr. 1-100 and strychnia gr. 1-50 every five hours, and digitalin alone every three; keep the patient warmly wrapped to the throat.

If there has been *bowel stitching*, solid food must be withheld for at least eight days, then only given with the greatest care and judgment. In a case of resection, or if the stitching is as low down as the sigmoid, give only liquid food for ten or twelve days, and allow no injection for flatus;

nor is it wise to give injections of half a cup of warm milk and whiskey.

Should a *fecal fistula* result, remove the glass tube and insert in its place a rubber one of the same size; this is taken out and cleaned when necessary—several times a day if the discharge is great—always practicing the most scrupulous cleanliness.

The *treatment of hysterectomies*, both preparatory and following the operation, is the same as that of an ordinary section, with the additional care of the clamp. This must be examined *at least* every hour. If any oozing, tighten the screw; if discharge sufficient to saturate all the dressings, about the third or fourth day remove all the gauze, which can be easily taken off, and put on fresh; and in some cases it is necessary to dress the stump with tincture of chloride of iron. The dressings are not again touched until the tenth day, when they are removed, the stump thoroughly cleaned, and the stitches taken out, with the exception of three or four just above the stump. The incision is then dressed permanently. Over the upper part of it are laid several thicknesses of gauze, and the abdomen is strapped with long broad strips of adhesive plaster, leaving the lower end of the incision and stump exposed. This part is dressed each day, using a small glass syringe for washing out around the stump with boracic acid or bichloride solution. If the granular tissue is not healthy in appearance, wipe out the lower end of the incision with cotton, saturated in equal parts of alcohol and glycerin. The clamp is now tightened at every dressing, and about the sixteenth day the stump falls off, or, if the pedicle is exceedingly small, it may be cut off. When there has been no discharge, the stump and dressings dry, do not touch it until the tenth day, when fresh dressings are put on, and the treatment the same as above. In this case the stump has become mummified and drops off about the ninth or tenth day—sooner than when there has been oozing. Do not allow these patients to turn over before the twelfth or fourteenth day. In these cases must you especially guard against hæmor-

rhage, which is easily excited and just as easily controlled with the extra peritoneal method of amputating the uterus. There may or may not be a flow. There is a peculiar psychical effect following this operation, so depressing in its effect, that, for its relief, every effort must be made on the part of the nurse. These patients are harder to propitiate and care for than any other class.

For a *perineal section*, or an *amputation* or *laceration of the cervix*, the preparatory treatment is the same; baths, douches, liquid diet, and rest, with free purgatives. On the day after the operation, the patient is given beef tea and toast, and is turned upon her side. After this she eats in moderation for a few days, and then about what she likes. Douches as soon as the metrostaxis, which generally follows these operations, has ceased; always instruct the nurse to "hug the anterior wall of the vagina." Stitches removed on the eighth day, and on the fourteenth she may get up.

You may probably have noticed a tendency towards an obliteration of the U. S. P. in this account. Pre-eminently above everything else stands Rochelle salts; then we have digitalin and strychnia, and finally tincture of iron chloride is occasionally administered to an anæmic patient, three drops three times a day, increasing one drop each day up to ten. No form of opiate is allowed in the house—under no circumstances is it given; occasionally it is smuggled in by patients addicted to the habit. Instruct the nurse to be most careful, and, where it has been used, to be suspicious of friends and relatives.

I have detailed the treatment of these cases as they have come under my observation during my five months' work with Dr. Price; have told you how he met each complication, but in this respect there is little to tell, as in the ninety odd cases at that time in the hospital, there were only three or four that presented any unfavorable symptoms, and even these recovered so rapidly as to leave us in doubt as to whether there had really been any or not. As an aid to me in the treatment of *complications*—the effects of the operations—my summer's work was almost a failure; but

the care of perfectly normal sections I think I have fully described. If my account is rather unsystematic, it must be pardoned, as it is the work of odd minutes; but I hope that it will give you some information as to the care and attention which Dr. Price's patients receive.

Is it strange that, with the above treatment, so simple, and withal so thorough, a success which is almost phenomenal should be obtained, a mortality, which even in the hands of the most brilliant operators, was startling, should be reduced to almost *nil*? Nay, for success must ever follow where perseverance and single-minded purpose have paved the way; and the person who undertakes abdominal surgery must necessarily leave all other thoughts and purposes aside and concentrate his energies upon this mighty subject.

In the fourteen or fifteen hundred sections done by Dr. Price, all in the horizontal position, his mortality has been 3 per cent. Is it wise, then, to follow in the footsteps of Dr. Krug, who, while revelling in the fruits of a *ripe* experience of one hundred and fifty to two hundred sections done in the Trendelenburg posture, challenges any one, "is willing to match results with those of anybody else who operates in a horizontal position"? Let him bring forth his statistics and compare them with the following. Let any one, who can, show a lower, or as low, a mortality and under the same adverse circumstances than is found in these statistics, extending over a period of four years; and *then*, and not until then, will we acknowledge any superiority of the Trendelenburg posture over the horizontal.

In a public hospital, where no case, however desperate, was refused, we have the following:

1888 to 1889—80 cases, 3 deaths,	$3\frac{3}{4}$ per cent.
38 drainage cases,	$47\frac{1}{2}$ per cent.
1889 to 1890—89 cases, 4 deaths,	$4\frac{4}{8}\frac{4}{9}$ per cent.
40 drainage cases,	$44\frac{8}{8}\frac{4}{9}$ per cent.
1889 to 1890—169 cases, 7 deaths,	$4\frac{2}{1}\frac{4}{6}\frac{4}{9}$ per cent.
78 drainage cases, 7 deaths,	$46\frac{2}{1}\frac{6}{6}\frac{4}{9}$ per cent.

To show the mixed nature of cases constantly dealt with,

I give the following, the first hundred successive sections done by Dr. Price, in his private hospital, during the first eight months of 1891 :

39 Ovariectomies,	20 drainage cases,	1 death.
4 Large tumors, fibroids and cystoma.		
36 Pus cases,	33 drainage cases,	2 deaths.
3 Ectopic pregnancies,	3 drainage cases,	
4 Appendicitis,	4 drainage cases,	
2 Porros,		
9 Hysterectomies,	3 drainage cases,	
2 Freeing adhesions,		
1 Ventral hernia.		

This table includes a group of the most desperate and neglected cases, many having been refused by a number of surgeons ; some have been turned away from hospitals as "incurables" after a long or short stay there ; some were relieved, and many were abandoned, or incomplete operations.

Of the three deaths, two were hopeless when placed upon the table, and the third died from heart clot sixteen days after the operation, not having before presented an unfavorable symptom. Some of the seemingly hopeless cases would justly have been omitted, but *all* have been told—some recovered, others died ; this includes operations for malignant growths as well as any other.

Complications arising from incomplete operation have been most marked and difficult to handle, having caused great emaciation, ravages from suppuration, visual lesions, etc., requiring resection and careful stitching. Nothing can justify an incomplete operation ; it is the duty of every operator to finish his own work, and not delegate some one else to do it for him, thereby increasing the dangers and difficulties to patient and operator an hundred fold.

Having had the rare good fortune to witness more than one hundred operations done by Dr. Price, and of listening to his demonstration after each, I will give the substance of his remarks, that others may reap the benefit. Especially appropriate are they, inasmuch as at least fifty per cent. of

the above-mentioned cases have received electrical treatment, or have had a great variety of local treatment for so-called pelvic cellulitis.

It is a notable fact that when complications exist, and when there are universal well-organized adhesions, the cause can undoubtedly be traced to one of these numerous methods of treatment. The inflammation set up by local treatment, commencing in the cavity of the uterus, is carried thence to the pelvic organs, causing adhesion of the fimbriated extremity of the tube to the ovary where it presents the appearance of an amputated finger, with distinct cicatricial lines. On breaking the cyst at the attachment to the ovary, there would, in all probability, be a hernia of the fimbria; the fimbria often becomes fixed to any of the pelvic organs or walls, and occasionally to the appendix vermiformis.

These adhesions form a thick veil, enveloping the diseased organs and giving a firm anchorage to those adjacent, requiring positive strength to break them, needing no microscope to see them, for what is removed must be seen with your great big eyes and felt with your great big fingers after the incision is made. Nor will a sponge in the vagina, and the external application of a nicely-padded and properly-salted electrode, cause these adhesions to melt before electricity as dew before the sun.

About one hundred years ago, some man wrote up this condition of affairs and called it cellulitis—*pelvic cellulitis*! Up to this time, the disciples and followers of this wonderfully wise man of one hundred years ago, and, in fact, all aspirants to abdominal surgery, and writers of books on this subject, sit in their libraries, before a revolving book-stand, holding six books; and, after reading one chapter from each one of these six books upon this all-important and life-saving, or, sad to say, often life-destroying subject, of abdominal surgery, condenses his vast amount of knowledge—purely theoretical—into a perfectly new and original chapter, representing the same old story, but set to new music; then, regardless of what he may have learned, and de-

monstrated in the operating-room, and from necropses, he calls it—pelvic cellulitis!

That there is, and can be, no cellulitis and perimetritis, has been demonstrated by those men who operate upon finding an "exudate" after making a vaginal examination. In the fourteen or fifteen hundred sections done by Dr. Price, no such thing as an "exudate" from cellulitis has ever been found; this fact being demonstrated by the number of cases of pyo-, hydro-, and hæmati-salpinx that he has, with such wonderful success, operated upon—the only radical treatment for which is *the knife*.

The methods of treatment are massage, tampons, painting the vaginal walls with iodine, electricity, and "all such rot." The first of the above treatment is simply a refined method of masturbation to which no woman should be subjected at the hands of man.

It is utterly incomprehensible how any sane man can advocate the use of electricity; it seems that it is only in such hidden regions as the pelvis that the electricians claim any resulting good from their treatment. Why not apply this all-powerful, this infallible and omnipotent curative effect of electricity to the resolution of abscesses found in the necks of strumous children? Certainly wealthy mothers would pay well, even handsome fees to save their children from carrying through life such loathsome scars, not to mention the satisfaction of the operator upon curing his patient without the deformity resulting from the formation of a cicatrix.

However, when the case comes to the operator he must remember always to be as quick as he can, as clean as he can, as thorough as he can; and, more than all else, must he remember that dependent upon him, and behind all he does, there is—a life.

Doctor, are you acquainted, by practical experience, with the success of the hypophosphites of lime and soda (Churchill's treatment) in consumption? Read the excellent article, "New and Old Cures for Consumption," on page facing first reading page of this issue.

Clinical Reports.

Hydatidiform Degeneration of the Chorion.

By E. J. JONES, M. D., of McDowell, Va.

Mrs. M., aged 21, married May 9th, 1891; menstruated last April 3d, 1892. I was called to see her July 9th, 1892. The first "show" she had seen since her last menstrual period made its appearance on Thursday night (July 7th) before I saw her at 10 o'clock, and was profuse. Soon pains came on accompanying the hæmorrhage, and continued until the next day, when she took several doses fluid extract viburnum prunifolium, which had been sent her by a brother physician. After several doses were given pains almost ceased, and also the hæmorrhage, until Saturday, July 9th, about 11 o'clock.

I was called in the evening, and saw her at 4 o'clock, at which time the bleeding was slight, but the pains severe. An examination showed the os to be undilated and the cervix quite rigid. The condition gave rise to some question of mine concerning the expediency of adopting preventive treatment, and in order to secure some time for consideration, after having observed further developments, and at the same time relieve the patient's suffering, 15 grains of chloral hydrate were given, and the dose repeated in half an hour. This entirely relieved all pain.

At 9 o'clock of the same evening, the patient was seen again. Pains had returned, and were more regular; hæmorrhage slight; os not sufficiently dilated to admit the finger, and the cervix rigid. After rigid antiseptic precautions, which had been observed from the first, the vagina was thoroughly tamponned through Gower's speculum, by means of absorbent cotton squeezed out of carbolyzed water, and then covered by glycerin, and held in place by a T shaped bandage. This was done at 11 o'clock, and remained in place until 4 o'clock in the morning, when, upon removing, it was found that the os was dilated sufficiently to admit a finger, and the cervix had lost much of its rigidity. A mass of vesicular mole as large as a man's hand was found resting against the tampon. After the use of chloroform by inhalation, the whole hand was introduced into the vagina, and by means of two fingers the uterus was cleared of its remaining contents, which proved to be the

remaining parts of a hydatidiform degeneration of the chorion.

The uterus was flushed with a bichloride solution $\frac{1}{4000}$ th, and followed by boiled water. A moderate dose of ergot was given, and the patient kept very quiet for a few days, morphine having been given once to relieve after pains; an uninterrupted recovery resulted.

Foreign Correspondence,

Vienna—Prof. Fuchs' Eye-Clinics—Numerous Practical Observations—Ethyl Bromide as Anæsthetic—Prof. Storke's Throat Clinics—Some Cases of Interest—Prof. Billroth's Surgical Clinics.

Dear Doctor Edwards,—In such a medical centre as Vienna it is not difficult to find items of interest to fill a letter promised the *Medical Monthly* from this city. Perhaps no city in the world has its hospitals so well arranged to suit the convenience of the medical student—the main public hospital having within its walls accommodations for between two and three thousand patients, distributed between the various branches of medicine and surgery, besides a large dispensary and ambulance service. One has only to walk from one portion to another to see an unlimited supply of clinical material in every line of practice.

One of the largest clinics is that of Prof. Fuchs, on the eye, and I was of course most interested in their methods, which differ from ours. In *extraction of cataract*, for instance, in the large number that I saw them do, iridectomy was performed in the majority of cases. They say they do a larger number with than without an iridectomy. They omit iridectomy only in perfectly developed cataracts, with good anterior chamber, and where everything is favorable.

The operator sits before the patient, all of the surgeons seeming ambidextrous, using the instruments with either hand equally well. One very great advantage of this position in iridectomy is that the cut is from the pupillary edge

of the iris towards the periphery, making the coloboma larger next the pupil, as it should be. Especially in making a pupil for optical purposes, is this an advantage. The capsule of the lens is torn, and a portion removed with forceps.

Their *antisepsis* is most exact. The patient's face, after having been cleansed, is covered with antiseptic gauze during the operation, with an opening cut in it over the eye. The instruments are boiled for four minutes, and the conjunctival sac most carefully washed with sublimate solution. They claim to have no suppuration. I have never seen surgeons so careful in the cleansing and disinfecting of their own hands, or where all the details of antiseptic surgery were more conscientiously carried out.

For *opacities of the capsule remaining after extraction of cataract*, they use scleral discission very largely. Instead of passing the needle through the cornea, it is introduced through the sclerotic, about a quarter of an inch behind the sclero-corneal junction, and is pushed forward until it can sweep the pupil.

In *tenotomy for strabismus*, the difference in their method is not striking. A large incision is made in the conjunctiva; but instead of catching the tendon with a hook, it is grasped with the same pair of forceps that is used on the conjunctiva, and then cut. The hook is only used to search for strands of the tendon that may not have been caught by the forceps. The conjunctival wound is then closed with a stitch.

The same method is used in *enucleation*, and permits of its being performed very rapidly. Yesterday I saw an eye enucleated in less than one minute. Only two instruments were used—the forceps and one pair of scissors. There were four enucleations yesterday.

For *trachoma*, they too use surgical methods most largely, each trachomatous granule being dissected out.

For the shorter operations, *bromide of ethyl* is very popular, and deservedly so. In less than a minute, the patient is anæsthetized, and within the same time after the inhaler

is removed, he regains consciousness, usually saying he has had pleasant hallucinations and can at once walk away. Merck's preparation of it is said to be the best, and greatly improved over any that could be obtained several years ago.

I have not seen ether administered in a single instance, *chloroform* being used instead. *Esmarch's inhalers* are employed, and a flask for the chloroform that regulates the flow by pressure of the thumb, and that is conveniently swung over the shoulders by a strap. They administer chloroform freely and fearlessly, the patient being kept under its complete influence all the time.

In the throat clinic, I was much interested in a *case of cancer of the larynx*, that had been removed with half of the larynx over three years ago, and in which there were no evidences of recurrence. The patient speaks quite distinctly, though with a rough sound.

In the same clinic (Prof. Störke), I was shown a boy of twelve who, as a result of diphtheria, had *cicatricial bands across the glottic aperture* that necessitated their section through a laryngotomy.

In the eye department, they have recently had two rather unusual results—one a *successful removal of a cysticercus* with reasonable amount of vision; and a complete and *successful removal of the iris*—in the latter case the operator being a cow and the instrument her horn. The cornea was torn, and iris completely removed without injury to the lens or vitreous.

While my time has been, in the main, most interestedly engaged in eye, ear, or throat matters, I have not been able to resist the temptation to sometimes attend Billroth's clinic. Last week I was present when a *resection of the small intestine* was made. The manner of suturing the abdominal wound was specially noticeable in that three sets of stitches were used—a continuous cat-gut suture in the peritoneum, an interrupted set in the muscular layer, and a third set of interrupted silk sutures on the surface.

Their *method of removing warts* is heroic, and should be efficacious. They are first twisted out with torsion forceps,

then scraped with a gouge, and finally nitric acid is freely applied. A very pretty girl of about eighteen submitted to the removal of some thirty or forty on her hands, arms and neck without giving the slightest evidence of the pain she was suffering.

Patients who attend the hospitals here seem trained to bear with composure any pain or indignity that is heaped upon them. Especially is this the case with the women. In fact, I can find not one other single fault with this attractive country, and especially the beautiful city of Vienna—the second Paris—than with the lot of its women. Only to-day I saw several working in the capacity of hod-carriers on a large building. The more the shame, when it is remembered that, as a class, the *Viennese women* are peculiarly attractive and beautiful.

In Prof. Billroth's clinic a *nævus* on the face of a child was removed by scraping, bromide of ethyl being used as the anæsthetic, and the wound being most carefully dressed and antiseptically bandaged.

Another *nævus*, on the back, was destroyed with the thermo-cautery. The point of the cautery was introduced to the depth of a quarter of an inch entirely around it, and then the central portion more superficially burned.

To return to the subject in which I am more interested—the eye—it is the practice here to *extract cataracts* at a much earlier period of development than is usual in America. Indeed, we owe to the Germans the credit of demonstrating the fact that it is not necessary to subject our cataract patients to the long-waiting spell between the loss of useful vision and complete opacity of the lens.

Regretting that I cannot have the pleasure of attending our State Medical Society this year, my steamer not sailing from Liverpool until September 14th,

I am very truly yours,

CHAS. M. SHIELDS, M. D.

Vienna, August 10, 1892.

(Of Richmond, Va.)

*Analyses. Selections, etc.***New Treatment of Transverse Presentations—Gravitation.**

Eugene Everett Barnum, A. M., M. D., of Lancaster, C. H., Va., Ex-President of the Orleans County (N. Y.) Medical Society, etc., says (*Buffalo Med. and Surg. Jour.*, Feb., 1892,) that transverse presentations, at all times, are serious; but their gravity is far greater if the patient has been left without medical treatment until convulsions, or threatened collapse, or the unexpected appearance of a hand protruding from the vulva occurs. Delivery by the unaided power of nature is the very rare exception and not the common rule. All agree that an attempt should be made to perform version, but the attempt usually fails, unless it is made early in the labor. When this fails, the only methods of treatment are Cæsarean section or embryotomy. In the former, the danger to the mother is great; the latter operation necessarily destroys the child, and is far from being without danger to the mother. In cases of such gravity, any method is worthy of a trial, if it holds out a prospect of reducing the danger either to the mother or to the child. Hence the following history of a case:

March 27, 1890, Dr. Thomas D. Eubank was called to a case of transverse presentation, colored, age 27, mother of three children. Former pregnancies and labors normal. This, her fourth, pregnancy was without incident until the middle of her eighth month, when she fell out of her house-door, face foremost. Her labor began at term, two weeks later, about 3 P. M., March 26th. Colored midwife came at once. Early the next morning the "waters broke and a hand was thrust forward with the pain that broke the waters."

After several hours—the patient meantime having had several convulsions—Dr. Eubank was called about 3 P. M., twenty-four hours after the beginning of labor. The right shoulder was presenting with the hand protruding at the vulva. After vainly trying to perform version, he sent for Dr. Barnum, who arrived about 7 P. M., and found the arm prolapsed as far as the elbow, the waters drained away, the uterus in tonic contraction, caused (to some extent at least) by ergot which the midwife had given, and the patient discouraged and nearly exhausted. We renewed the attempt to perform version and again failed, on account of the firmness with which the shoulder and side of the head were

jammed down upon, or just within, the pelvic brim. All attempts to replace the prolapsed arm also failed, on account of the tetanic contraction of the uterus upon its contents. The force with which the shoulder was crowded into the superior strait, is shown by the fact that several months elapsed before the child could move that arm as freely as its fellow. Neither Cæsarean section nor embryotomy was practicable in this case. The former operation would almost necessarily cause the death of the mother. Instruments for the latter operation could not be procured in time to be of service. In this emergency, Dr. Barnum determined to try a method, which, so far as he knew, had never been recommended in the treatment of transverse presentations.

Failure to perform version was due to the firmness with which the presenting part was held upon, or just within, the pelvic brim. To overcome this difficulty was the problem. Remembering that Dr. W. W. Potter, of Buffalo, had met with very gratifying results, in certain cases of gynecological practice, by calling the force of gravity to his aid; and remembering Dr. Playfair's treatment of prolapse of the cord, by calling the same force to his assistance, he decided to make use of this force.

The woman was placed in the knee-chest position upon the bed, when we again attempted to push back the fœtus, hoping either to replace the arm and get a vertex presentation, or else to perform podalic version; but so firmly was the fœtus held in position, that we again failed. Dr Barnum next brought the patient on her knees, to the edge of the bed, with a strong assistant at each side. Her head was slowly lowered until her position was nearly inverted—her head almost touching the floor. Then compelling her to breathe rapidly, to prevent her "bearing down" involuntarily during her pains, we soon began to feel the gradual withdrawal of the fœtus from the superior strait. Within a very few minutes—probably not more than five—we were able to replace the arm. With the next pain the head presented by spontaneous version. The patient was then directed to "bear down hard," and was placed in bed, the descent of the arm was prevented by means of a finger in vagina. Labor proceeded rapidly, and within fifteen or twenty minutes the child was born *alive*.

From a careful study of this case, with the aid of all the obstetrical literature within reach, he formed the following conclusions:

- I. This was a typical case of transverse presentation when

first seen by Dr. Eubank, twenty-four hours after the beginning of labor, and many hours after the hand "was born."

II. In that last stage of the labor, version by the usual methods was a physical impossibility; embryotomy was not possible, on account of the absence of the necessary instruments, and Cæsarean section would only have hastened the death of the mother.

III. By the method of treatment employed the presenting part was removed from the superior strait, the malposition was corrected, and the child was born *alive*,—the whole time, from the beginning of the treatment to the birth of the child, not exceeding thirty minutes.

IV. If the changes of position are made slowly and carefully, very little, if any, distress or harm will be experienced by the mother.

V. Special complications may call for special treatment,—for instance, convulsions may require the use of chloroform, etc.

VI. This method will be found useful in performing version by external or internal manipulation, or by both combined, and in many cases, it will give nature a chance to correct the presentation by spontaneous version.

VII. A failure of this method will not prevent or complicate treatment by Cæsarean section or embryotomy.

Abscess of the Liver.

Prof. Wm. C. Dabney, of the University of Virginia, read "A Contribution to the Study of Hepatic Abscess" before the Association of American Physicians last May (*Amer. Jour. Med. Sci.*, August, 1892,) of much practical as well as scientific value, based, in great part, upon an analysis of 108 cases collected from various sources. Every paragraph of the entire paper is worthy of attentive reading; but we have only room to present the following conclusions of this studious practitioner and able teacher—each of which is either warranted, or rendered highly probable:

1. Hepatic abscesses rarely occur as a result of injuries or diseases of the bones or other parts of the body, except those directly connected with the portal system of veins, or immediately adjacent to the liver.

2. Ulceration of the bowels is a common cause of hepatic abscess, but neither the morbid changes nor the symptoms are those of simple dysentery. It is probable that in most cases, at least, when the hepatic abscess is due to dysentery the latter disease is amœbic in character.

3. An hepatic abscess may appear in two weeks from the commencement of the dysenteric attack, but the usual time is from four to twelve weeks. It is impossible to say how long a time must elapse after an attack of dysentery before all danger of hepatic abscess is past.

4. Abscesses originating in the bile-ducts, and those due to injuries of the liver itself, seem to be of comparatively rare occurrence. When due to injury, the abscess usually appears in a few days.

5. Abscesses appearing in connection with general septicæmia or pyæmia are probably nearly always multiple in number and small in size, but in rather more than half of all other cases the abscess is single and comparatively large. Abscesses due to gall-stones, however, are usually multiple.

6. Aspiration occasionally fails to reveal an hepatic abscess, because the needle may fail to enter it, or the contents of the abscess may be too thick to flow through the needle.

7. There are no means of determining with certainty the presence or absence of adhesions in a given case; pain, tenderness and œdema over the seat of the liver suggest the presence of adhesions, but are by no means certain proof of their existence. Even the up-and-down movement during respiration of a needle inserted into the liver is not a conclusive proof that adhesions do not exist, as was shown by a case recently under my care.

8. Of the symptoms and signs of hepatic abscess—pain, tenderness, and swelling in the hepatic region are by far the most important. Fever is present in a large proportion of cases, is intermittent in character, and, except in pyæmic cases, rarely rises above 102.5° or 103° . Jaundice and ascites nearly always denote the presence of dense adhesions or gall-stones. Dyspnœa and cough are frequently present.

9. It is doubtful whether absorption of the contents of an hepatic abscess ever occurs; bursting is of frequent occurrence, the most usual direction being into a bronchus or the pleural cavity. Under expectant treatment death occurs in a large proportion of cases before bursting.

10. With respect to treatment, free incision and drainage give far better results than any other mode. The results of aspiration are rarely satisfactory, nor is aspiration itself entirely free from danger.

Leukæmia Treated by Fowler's Solution.

Dr. W. S. Thayer reported to the Clinical Society of Maryland, March 18, 1892, the case of a colored man about 30 years of age. He first reported to the Johns Hopkins Hospital Sept. 15th, 1890, complaining of shortness of breath, swelling of feet, and great swelling of abdomen. The spleen was enormously enlarged, filling up the whole of the left side of the abdomen and reaching beyond the median line. Examination of the blood showed one white to four red corpuscles. There was no history of malaria.

He was placed upon Fowler's solution, three minims, *ter in die*, increased by one minim every other day until physiological effects appeared. In about four weeks, the proportion of white to red corpuscles was one to seventeen. He then returned home to Virginia and ceased to take medicine.

He came again January 29, 1891, his blood at that time showing a proportion of one white to three red corpuscles.

He was put upon arsenic, and within nineteen days the leukocytosis had entirely disappeared. On May 27, he went away feeling very much better. His white corpuscles were normal, and his red corpuscles numbered 4,000,000 in the cubic millimetre. His spleen, which had touched on the right Ponpart's ligament, was reduced in size, extending only a hand's breadth below the costal margin. He took the arsenic solution in increasing doses until the dose reached 12 or 13 minims *ter in die*. When physiological symptoms appeared, the dose was reduced and then started up again. He took 12 minims regularly for two months without any symptoms.

Nothing was heard of the patient for 8½ months. On February 9th, 1892, he returned. He said he had felt perfectly well until last Christmas. An examination revealed that his spleen was larger than ever before, legs œdematous, and there was a proportion of one white to every nine red corpuscles in his blood. After a week's treatment in the Dispensary, he was admitted to the Hospital, where he has been for four weeks. During this time, the red corpuscles have increased from 2,700,000 to 3,400,000, and the white have diminished so that the proportion, instead of being one to nine, is now one to thirty-five. He has gained ten pounds. His spleen is somewhat diminished in size, and his general condition has improved very much. His reaction to arsenic each time has been very striking.

It is in this condition with enlarged spleen that treatment

seems to do most good. Some cases are reported where there seems to have been a definite recovery.

Dr. J. E. Michael remarked with reference to this case that only a few years ago this case would have passed for a malarial one in the hands of the general practitioner, especially as the man comes from a malarial region.

Ectopic Gestation—Death of Fetus at Third Month—Fatal Hæmorrhage Outside the Sac at Fourth Month.

Dr. I. S. Stone, Surgeon to Columbia Hospital, Washington, D. C., reported (*Amer. Jour. Obstet. and Dis. Women and Children*, Vol. XXV, No. 4, 1892,) the case of a widow 18 months, colored, age 40 (?); admitted to Columbia Hospital July, 1891; mother of several children; for four months she had failed to menstruate regularly; her condition indicated collapse; hurried examination revealed pregnancy in the cavity of the right broad ligament; hæmorrhage was progressing; pulse could not be counted; stimulants were used freely; abdomen opened about two hours after she was admitted. "She had fainted twice during this time, and I now regret that I did not open the abdomen without the loss of time expended in trying to revive her."

When the peritoneum was opened, much fluid blood escaped, followed by much that was coagulated. The broad ligament was clamped, close to the uterus and at its distal extremity, with forceps, which stopped the loss of blood. Removal of the clots exposed the sac, which was in and below the broad ligament, and was ruptured by my manipulations. A three months' fetus escaped with amniotic fluid, and the placenta followed closely after it without breaking the cord.

The lower part of the sac extended far below the uterus; in the lowest portion there was a quantity of old, dark blood-clot. Very little hæmorrhage came from the sac; hot water flushing checked this, and left the abdomen in fairly good condition to close, which was done in about twenty minutes after the operation was begun. The patient's pulse improved under the anæsthetic, but she died soon after reaching her room. Examination of the fetus and placenta showed that "separation" must have occurred some weeks previous, as the fetus was undergoing maceration, as evidenced by softening and separation of portions of epidermis. The old blood-clot in the sac probably indicated the time of the placental separation and fetal death. Necrosis of the sac, and vessels supplying it through the broad liga-

ment, caused the fatal termination, as the blood poured into the abdomen without hindrance.

The symptoms of extra-uterine fetation were marked, and her history for the four months of her pregnancy gave every indication for active interference, yet she was treated for nearly every form of pelvic disease save the right one. She had frequent attacks of syncope, pain, and occasional discharges from the uterus; yet her statement denying intercourse had been taken in evidence, rather than the actual physical signs.

He has been unable to find a case similar to this, which shows that danger to the life of the patient is not always averted when the death of the fetus is accomplished.

Salophen in Acute Rheumatism, Gastro-Intestinal Diseases, etc.

From recent reports, it appears evident that the new organic compound, acetyl-para-amidosalol, or *salophen*, is to take a very high place in therapeutics, not only in acute rheumatoid maladies, but in those in which a principal object of treatment is to secure an undisturbed and continuous intestinal antiseptis without risk of injury to the patient. The *New York Medical Journal*, July 30th, 1892, contains an article on salophen by Wm. H. Flint, M. D., of the Presbyterian Hospital, which foreshadows some of the excellent effects which may now be expected from this extraordinary new remedy. Dr. Flint says that during his summer hospital service he caused salophen to be administered to all cases of rheumatism, and that he was so well pleased with its action that he "desired to make known to his confreres the advantage of salophen treatment, hoping that their results may be as happy as his own." The author presents detailed reports of six cases of acute rheumatism treated with salophen in 15-grain doses, given dry upon the tongue and swallowed with cool water, every three hours; and with sodium bicarbonate, in 10-grain doses, administered in the same way, thrice daily.

His conclusions are as follows: "It will be seen that in all the cases except the last the pains were quite relieved, the redness dispelled, and the temperature reduced to the normal point on the second or third day of treatment. In the one exceptional case, the patient may have exaggerated the intensity of her pain to prolong her stay in the hospital; but no objective symptom persisted after the seventh day of treatment. It is probable that a speedier result may be safely obtained by the use of larger doses, or of the same

doses at shorter intervals. In none of the cases was the heart's action at all weakened, nor was the digestion impaired by the remedy. The urine was unaffected by the treatment." He concludes that: "We possess in salophen a remedy equally as potent as the other salicylates to control the symptoms of acute rheumatic arthritis, but devoid of their tendency to weaken the heart's action, to disturb the stomach, and to produce albuminuria and smoky urine."

It will be observed, as hinted by Dr. Flint, that he might, had he so desired, have used larger doses of salophen, as, indeed, others have done; but many will agree that our best and most lasting results are often obtained with medium or small doses.

We are glad to learn of the writer's purpose to conduct a series of experiments with a view to ascertaining whether salophen may be made available for securing intestinal antiseptics; not only on account of the author's well-known reputation in the treatment of gastro-intestinal maladies, but because other observers have already spoken of the value of salophen in such formidable affections as gastro-ectasis and other severe conditions of which abnormal fermentations constitute a symptom.

For Vomiting of Pregnancy.

Dr. Frank R. Fry, of St. Louis, says (*Med. Fortnightly*, July 15th, 1892,) the following formula has been very serviceable in his hands:

R—Cocain. muriat..... gr. vj
 Cerii oxalat..... gr. xxiv
 Glycerin.....
 Aq. laurocer.āā ʒiij
 Aq. destillat.....q. s. ʒiij

M.—S: Tablespoonful (taken cold) every two hours to once or twice a day *pro re nata*.

That Ponca Compound is a Specific for Dysmenorrhœa,

Dr. Floyd Clendenen, of La Salle, Ill., is inclined to believe. He reports the case of Miss C., age 19, who suffered such severe pains for twelve hours at each menstrual period that she wished to die. She had leucorrhœa also. He prescribed two Ponca Compound Tablets every six hours for ten days prior to each monthly return, and the pain and leucorrhœa have both disappeared. This is but one of many cases he could mention.

**Ligation of the First Portion of the Left Subclavian Artery and
Excision of a Subclavio-Axillary Aneurism—Successful.**

Dr. Halsted exhibited the patient before the Johns Hopkins Hospital Medical Society, May 23, 1892 (*Johns Hopkins Hosp. Bul.*, July–August, 1892), and gave the following history:

Levin Waters, colored, æt. 52 years, admitted to Hospital April 30th, 1892, is a vigorous man, gives a good family history, and denies having had syphilis. Perfectly well until eight months ago; he then noticed a small swelling about the size of a madeira nut under the left clavicle. There was, at this time, a distinct pulsation in the tumor. He "could feel it beat like his heart" when he put his fingers upon it. The tumor has grown rapidly since it was first observed. Until one month before the operation the patient worked regularly, did heavy lifting, etc., and had experienced little or no discomfort from the aneurism. His only symptoms were a slight numbness of the left hand and forearm, and, subsequently, a shortness of breath and a hoarseness—both of which he attributed to a cold. He has never had a pain which could be referred to the tumor.

On admission, the patient had an almost spherical, perfectly smooth tumor under the left clavicle, somewhat flattened on the side which pressed against the chest-wall, and measured 42 cm. in circumference at its base. The middle third of the clavicle was overlapped and almost concealed by the tumor; the lower margin of the tumor touched the fourth rib. Internally it extended to within 5 cm. of the left sterno-clavicular articulation, and externally to within 4 cm. of the coracoid process. The skin over the tumor appeared normal. Only after careful inspection could pulsation be seen. To the touch the tumor was quite solid, but elastic, and it was not easy to feel the feeble expansile pulsation. No pulse could be felt at the wrist nor anywhere below the aneurism. The left arm was neither swollen nor perceptibly cooler than the right.

Operation.—Skin incisions: 1. *Horizontal*, about 33 cm. long, from sternal notch to acromio-clavicular articulation, and thence down arm to lower border of major pectoral muscle over the greatest convexity of the tumor. 2. *Ascending, vertical*, about 5 cm. long, from inner end of the horizontal incision. 3. *Descending, vertical*, about 10 cm. long, from the middle of the horizontal incision. 4. *Ascending, vertical*, about 4 cm. long, from the horizontal incision at the acromio-clavicular articulation. The flaps so outlined

were reflected: the first, upwards and outwards; the second, downwards and inwards; the third, downwards and outwards. The inner third of the clavicle was then excised. The middle third of the clavicle was somewhat eroded by the aneurism, which overlapped it a little. The wall of the aneurism was inflamed, soft, and so very thin where it pressed upon the bone, that it would have been imprudent to attempt to dissect this part of the clavicle from the tumor.

The next step was the deligation of the left subclavian artery. This portion of the artery had been drawn down by the tumor, so as to occupy a horizontal position rather than a vertical one. It was entirely concealed by the subclavian vein, and lay below and behind the vein instead of above and behind it. Two strong silk ligatures were applied to the artery as it emerged from the chest, and the vessel was divided between them. The deltoid muscle was cut through a little below the clavicle, and the clavicle sawed through at about $2\frac{1}{2}$ cm. from its outer end. The aneurism, the greater part of the clavicle, a piece of the deltoid muscle, and about 6 cm. of the subclavio-axillary vein were then removed in one piece. The vein was intimately adherent to the aneurism. The axillary artery was ligated at the beginning of its second part. The operation as a whole was a tedious one, and consumed three and a half hours. The wound was closed with interrupted buried skin sutures of fine black silk. The large dead space incompletely covered by the skin was bridged over with gutta-percha tissue. The aneurism is a so-called true aneurism.

At the second dressing, thirteen days after the operation, the dead space is almost completely filled with a blood clot. This clot has not broken down, and is almost completely replaced by granulation tissue.

The patient has not had an unpleasant symptom since the operation. The left arm has never swelled, and has at no time been cold. For a few days only there was a slight numbness of the tips of the fingers, and particularly of the thumb. The case was altogether a most fortunate one for operation, in that, thanks to the clot which occupied the sac, the collateral circulation had already been well established.

This case is, perhaps, the only successful one of deligation of the first part of either subclavian artery, and the first one of complete extirpation of a subclavio-axillary aneurism.

The deligation of the first part of the subclavian artery has been effected once before, in 1846, by Dr. Kearney Rod-

gers, of New York, and attempted once by Sir Astley Cooper. Dr. Rodgers' case terminated fatally on the sixteenth day from secondary hæmorrhage. "At the autopsy, a large irregular lacerated opening was found in the pleura and the cavity was filled with coagulated blood." "The artery had been completely divided by the ligature, which was found loose in the wound. The stump of the subclavian, between the aorta and the ligature, presented the appearance of a round, solid cord about one and a quarter inches long, impervious to water and air." Beyond the ligature no plug other than a soft, quite recent clot occupied the lumen of the artery; the vertebral was given off immediately at the point of ligature, and contained a little clot, evidently formed only just before death; the internal mammary, also, was patulous and healthy." Sir Astley Cooper abandoned the attempt to tie this vessel, thinking that he had wounded the thoracic duct.

The first part of the right subclavian has been deligated twelve or more times, with a fatal result in each case. At least nine of the cases died of secondary hæmorrhage from the distal side of the ligature.

Dr. Halsted finds practically but one comment from surgeons on these results, viz., if absorbable ligatures had been used, and if the coats of the artery had not been divided, the mortality from secondary hæmorrhage might have been less. He would suggest, rather, that the aneurism be excised.

Note.—July 9th, sixty days after operation. The wound has healed in an ideal way. The numbness at the tip of the left thumb has not completely vanished. No pulse as yet is to be felt at the wrist. The patient has an excellent use of his arm.

Sulfonal in Arresting the Cramps of Fractured Limbs, and Reflex Spasms from Other Causes.

Dr. Edward Andrews, of Chicago, Ill., said in the Section on Surgery (*Jour. Amer. Med. Ass'n*, Aug. 27) that about three years ago his attention was turned to the remarkable power of sulfonal in arresting the spasms of fractured limbs by having given a dose for its hypnotic effect, and finding instead a strong antispasmodic result. Since then he has continued his experiments. Four or five writers have caught slight glimpses of its antispasmodic power. Forster, who is said to have administered not less than eighteen pounds of it, remarked that it is chiefly a motor depressor. Roubino-

vitch, in one case, cut off a paroxysm of spasmodic asthma by doses of fifteen grains. A. S. Faulkner, of India, reported one case of chordee arrested by it. J. M. Coates reported the greatest benefit in epilepsy, and in obstinate hiccough. J. A. Jeffries reported five cases of chorea rapidly cured by the article.

Dr. Andrews' first observation was upon a case of painful cramps from a recently fractured femur. Morphine relieved the patient as long as he could keep awake, but as soon as he became drowsy the cramps returned. On changing to sulfonal in fifteen-grain doses, the spasms were completely arrested, both in the waking and the sleeping condition. Repetition of the treatment in other cases of fracture showed always the same result.

A gentleman in a railroad accident received a slight fracture of the spine without any compression of the cord. He was harassed whenever he fell asleep by cramps of the intercostal muscles adjacent to the injured vertebra. Sulfonal in fifteen grain doses arrested the trouble completely.

The drug is slow in its action, and, where the cramps are only nocturnal, it is necessary to give either a large dose two or three hours before the sleeping time, or else to keep up the effect by using moderate doses three times a day.

He found one physician using this medicine to arrest the spasms of ejaculatory muscles which cause nocturnal emissions of semen. He gave six grains three times a day, and claimed excellent results. At his suggestion, Dr. A. tried it with good success, increasing the dose, however, to eight grains. From analogy, he thinks the remedy will act well in cases of premature ejaculation in copulation, but he has not yet tried it for that purpose.

A gentleman was troubled for many years with nocturnal cramps of the legs and thighs, increasing slowly as his years advanced. Fifteen grains of sulfonal taken before retiring always prevented the spasms. After two months he found that a single dose would prevent the trouble for nearly a week. In about ten weeks more the course of the trouble seemed to be cured, so that he has now been a long time without requiring or taking any of the remedy.

A vigorous young man fell 32 feet, striking obliquely on a slope of timber, causing a severe contusion of the right sciatic nerve, without fracturing any bone. The thigh and leg of the injured side kept up a constant and painful jerking motion, resembling somewhat the movements in chorea.

Two doses of sulfonal of fifteen grains each completely arrested the distressing movements.

It seems that the antispasmodic power of sulfonal is of more value than its sleep-producing influence, and that it will prove of immense value in many cases in which no one has yet thought of giving it a trial.

In the discussion before the Section of Surgery and Anatomy of the Association, June 10, Dr. Brooks, of Iowa, stated that he had sustained a fall, resulting in a severe synovitis, which caused sudden spasmodic contraction of the leg during sleep. Sulfonal was prescribed and the spasms relieved from the first.

Dr. Murphy reported the case of a pregnant woman who suffered much at night from cramps in the legs. He prescribed sulfonal, and found that one dose was usually sufficient to give relief. He has used the drug in two other cases with excellent results.

Dr. James A. Work, of Indiana, has a patient to whom he has been giving sulfonal for rheumatism, attended with cramps of the legs at night. The remedy acted admirably. It was a relief to know that as the case progresses less of the drug is administered.

Dr. J. I. Strippmatre, of Philadelphia, had found the drug useful in the low nervous form of typhoid fever, accompanied with jactitations. He related a case in which there had been no sleep for six days. Twenty grains of sulfonal were given, and the patient slept for twenty-four hours, only being aroused to take food. Recovery was thenceforth uninterrupted.

Pental Anæsthesia.

Hägler (*Correspondenzblatt für Schweizer Aerzte*, No. 6, 1892) reports 40 cases in which pental was employed to induce anæsthesia for minor operations, such as tooth extractions, opening abscesses, etc. A double mask with a layer of cotton-wool between, the outer mask being covered with waterproof cloth, was the inhaler. This was pressed firmly upon the patient's face, leaving the eyes uncovered. For children 5cc (80 minims) of pental were poured upon the cotton; for adults 10cc (160 minims) were so employed.

In most cases anæsthesia began quietly, became complete in one-half to two minutes, and lasted from 3 to 7 minutes. Sometimes excitement marked the inception. In an excitable, anæmic girl, the stage of excitement lasted throughout the narcosis, but she recalled nothing of what had occurred

during the administration of the drug. Almost every patient presented slight facial hyperæmia, beginning with increased heat of the cheeks and forehead.

The author describes a well-narcotized patient thus: The arms hang relaxed; the eyes are fixed and eye-lids widely open; pupils dilated; corneal reflex preserved in most cases; sensorium rarely quite extinguished. The use of penthal is never associated with salivation, nor followed by any unpleasant symptoms, such as cephalalgia, nausea, or vomiting. Upon recovering consciousness, which occurs rather rapidly, the patient experiences somewhat of exhilaration. In only one case was there mental depression, which persisted some time. All cases have complete amnesia of the occurrences during the anæsthesia.

Schumacher (*Zahndrztliches Wochenbl.*, No. 253, 1892) uses penthal, 3 to 4 grammes (three fourths to one drachm), without admixture of air, to produce anæsthesia for extraction of teeth. Narcosis is almost immediately induced in ordinary cases, while those who have sought courage in stimulants require about 30 seconds for the production of anæsthesia. Insensibility lasts from 30 to 50 seconds; in two minutes all cases entirely recover. The author is "firmly convinced that penthal is a grand means whereby we at last are enabled to extract teeth painlessly and without danger."

But like other agents that act so profoundly, penthal is more or less dangerous. Hägler (*Corres. für Schw. Aerzte*, No. 6, 1892) reports a case of *poisoning by penthal* in a healthy young man who was anæsthetized for the purpose of demonstration. After a few respirations, he became cyanotic. In 90 seconds, narcosis being established, dyspnœa set in, and grew more intense with deeper cyanosis. This was followed by complete inspiratory apnœa. The face became yellowish-blue, and the pulse imperceptible. Artificial respiration was induced. In two minutes the subject breathed spontaneously; in two minutes more consciousness returned, and he soon entirely recovered without any evil after-effects. —*Condensed Extracts*, August, 1892.

Iodine Trichloride in Genito-Urinary Tuberculosis.

Dr. Wm. T. Belfield, of Chicago, in a preliminary note (*Jour. Cut. and Genito-Urin. Dis.*, August, 1892,) states the results of his clinical investigation of this new agent in certain common disorders of the genito-urinary tract. Iodine trichloride is a simple compound of iodine and chlorine

(ICl_3), made by passing chlorine gas over iodine. The result is a reddish yellow powder, emitting an odor of chlorine, and is readily soluble in water. Dr. Belfield keeps it in stock as a five per cent. solution in distilled water. When a few drops of this or of a weaker solution fall into normal urine, instant decomposition ensues—both chlorine and iodine being liberated in the nascent state. This decomposition is caused, not by any of the urinary salts, but by an organic constituent of the urine—probably mucin. The same re-action occurs, though less rapidly, with blood, pus, saliva, and an infusion of muscle or connective tissue. A one per cent. solution rapidly sterilizes pure cultures of *staphylococcus pyogenes aureus*. These facts suggest great usefulness in treating local morbid processes dependent upon bacterial invasion.

I.—Male, aged 39, tuberculosis of bladder; instillation with ICl_3 solution, beginning with one-fourth of 1 per cent., increasing in four injections to 1 per cent. In three weeks, pus and pain were greatly diminished; intervals of urination lengthened from forty minutes to three hours. Here the treatment was interrupted; the patient, seen once subsequently, stated that improvement was still maintained.

II.—Mrs. K., cystitis for 7 years; urination every hour or less, urine containing much pus and some blood. Digital exploration revealed distinct tuberculous ulcer in upper segment of bladder. In twelve days three injections of ICl_3 solution—from one-half to one per cent.—were made, after which patient returned home. Two months later, Dr. Fry reported that the patient considered herself practically well, retaining urine several hours and passing it without pain.

III and IV.—Two cases of tuberculosis of epididymis, with old fistulæ, were treated with hypodermic injections of ICl_3 , one-eighth to one-fourth per cent. In both the fistulæ healed—for the first time in years—and the nodular masses were reduced in size over 50 per cent. in a few weeks.

It has also seemed a valuable agent in checking fermentation in the bladder in cases of residual urine from prostatic enlargement. While the cases narrated are too few and too incomplete to prove anything, they suggest the desirability of further testing this agent in the treatment of that most frequent and refractory malady, genito-urinary tuberculosis. It is merely in the hope that others will follow this course that this communication is made.

Book Notices.

New Pronouncing Dictionary of Medicine. *Being a Voluminous and Exhaustive Hand-Book of Medical and Scientific Terminology with Phonetic Pronunciation, Accentuation, Etymology, etc.* By JOHN M. KEATING, M. D., LL. D., Editor "Cyclopædia of the Diseases of Children," Consulting Physician for the Diseases of Women, St Agnes Hospital, Philadelphia. etc.; and HENRY HAMILTON, Author of a "New Translation of Virgil's *Æneid* into English Rhyme." etc. With the Collaboration of J. CHALMERS DA COSTA, M. D., and FREDERICK A. PACKARD, M. D. *With an Appendix Containing Important Tables of Bacteria, Micrococci, Leucomaines, Ptomaines; Drugs and Materials Used in Antiseptic Surgery; Poisons and their Antidotes; Weights and Measures; Thermometric Scales; New Official and Unofficial Drugs, etc.* Philadelphia: W. B. Saunders. 1892. 8vo. Pp. 818. Cloth, \$5 net; Sheep, \$6 net.

This long-promised *Pronouncing Dictionary* is out in good time for adoption by students about to begin their course in the numerous medical colleges of the country; and we sincerely hope that the various Faculties will specially recommend it. It is not because we have adopted the pronunciation of certain words as herein given; but we are willing to sacrifice something of our own views in order to secure more of uniformity of language. Mr. Hamilton, it seems, before fixing upon the arbitrary rule he has adopted, consulted Professors Warren, of Johns Hopkins, Greenough and Smith, of Harvard, Jackson, of University of Pennsylvania, Crowell, of Amherst, Wild, of ———, Packard, of Princeton, Peck, of Columbia College, Hale, of Cornell, and Hyde, of Lehigh, as to the proper pronunciation of *itis*, *g* before *i*, etc. But there was such want of uniformity in their positive recommendations—with so many *ifs* in their suggestions, etc., that Mr. Hamilton has adopted, in large part, the anglicised pronunciation "without hard and fast rules." He concedes that "either of these methods may be right, but, for harmony-sake, one or the other should be adopted." Hence he pronounces phthisis, thí-sis; bronchitis, bronk-í-tis; peritonitis, peri-ton-í tis; uterus, you-terus, etc. As to accentuation, he has closely adhered to the general rules laid down by Worcester governing the accentuation of English words, as given in his *Unabridged Dictionary*, etc. Leaving the pronunciative points of this *Dictionary* aside for future consideration, we find that Dr. Keating and his associates have introduced hundreds of new words with

their definitions now being adopted, and have omitted numerous obsolete terms contained in most dictionaries. The definitions are concise and well-framed. As to the mechanical work done on the book, the typography is quite accurate, the *clear* type were specially cast for this book, and the good paper was manufactured for this purpose.

Essentials of Diagnosis. By SOLOMON SOLIS-COHEN, M. D., Professor of Clinical Medicine and Applied Therapeutics in Philadelphia Polyclinic, etc., and AUGUSTUS A. EISHNER, M. D., Instructor in Clinical Medicine, Jefferson Medical College, etc. With 55 Illustrations, some of which are colored, and a Frontispiece. Philadelphia: W. B. Saunders. 1892. 12mo. Pp. 382. Cloth. \$1.50, net. (From Publisher.)

This is No. 17 of "Saunders' Question Compends"—"Arranged in the Form of Questions and Answers, Prepared Especially for Students of Medicine." Such a book, as the authors say, represents but an outline of the subject. Diagnosis must be studied from patients—not from books. These *Essentials*, however, are most serviceable helps to memory, and aid in preparations for examinations or in reviewing subjects. The authors have confined themselves to the best established facts, and thus their work is to be taken as an authoritative guide in the diagnosis of most of the diseases treated of in standard volumes on Practice.

Materialism and Modern Physiology of the Nervous System. By WILLIAM H. THOMPSON, M. D., LL. D., Professor of Materia Medica and of Diseases of the Nervous System in the University of New York, etc. G. P. Putnam's Sons, New York and London. 1892. Cloth. 12mo. Pp. 112. Price, 75 cts. (For sale by West, Johnston & Co., Richmond.)

This Address before the Philosophical Faculty of Columbia College is devoted to a discussion as to what is mind. The author gives a most excellent review of the whole subject as presented in the present day-school of philosophy, and arrives at the conclusion that mind is not matter—that brain is the engine, mind the engineer, and hence is a distinct something that gives direction to force or energy. The great misfortune of all such discussions attentively listened to, until more light is thrown upon certain essential elements in mental physiology, is that the reader arises from his study more mystified than when he began to form his own opinion.

Treatise on Diseases of the Nose and Throat. In Two Volumes. By FRANCKE HUNTINGTON BOSWORTH, A. M., M. D., Professor of Diseases of the Throat, Bellevue Hospital Medical College. New York, etc. VOL. II. *Diseases of the Throat.* With 3 Colored Plates, and 125 Wood Cuts. New York: William Wood & Co. 1892. Large 8vo. Cloth. Pp. 832. (From Publishers.)

Volume I, on diseases of the nose, appeared nearly three years ago. The delay in the issue of this Volume II is due to the fact that the author was too busy to devote proper time to its satisfactory preparation. Such delays very materially impair the popularity of a *Treatise*. But the author, in the issue of this second volume, has done a most valuable service to the profession; for he now presents a most valuable work on throat diseases, devoting special attention to the description of the most practical points. For instance, diphtheria is so treated of as to make the section on that subject of the greatest practical value to the general as well as special practitioner. In the general nomenclature of diseases, Dr. Bosworth adopts the rule of using only such names as in themselves both locate and describe the morbid processes. In scope, its pages seem to cover every conceivable phase of disease of the throat. In short, this *Treatise* is a most excellent and valuable one.

Recherches Cliniques et Therapeutiques, sur L' Epilepsie L' Hysterie, et L' Idiotie. Par BOURNEVILLE. *Medecin de Bicetre*, etc. VOL. XI. With 16 Cuts and 10 Plates. Paris: Progrès Médical, 14 Rue des Carmes. 1891. Paper. 8vo Pp. c-252. (From Publishers.)

This volume of clinical and therapeutic studies of epilepsy, hysteria, and idiocy, based upon cases of idiotic, epileptic, and feeble-minded children in the Bicetre during 1890, forms the eleventh annual series. The first 100 pages are devoted to the history of the service for 1890, etc. The remainder of the work is given to the clinical study of the most important or interesting cases. The most scientific methods were adopted in the study of each case, and where opportunity permitted autopsies were carefully made, and photographs accurately taken, which have been well-reproduced in the text. This work is of incalculable value to the student of the classes of troubles noted in the title of the book; and as the "recherches" are annually issued, it needs no pointer to indicate the great utility of the publication.

Science and Art of Midwifery. By WILLIAM THOMPSON LUSK, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children, Bellevue Hospital Medical College, etc. *New Edition. Revised and Enlarged. With Numerous Illustrations.* New York; D. Appleton & Co. 1892. Cloth. 8vo. Pp. xviii-761. Price, \$5. For sale by West, Johnston & Co., Richmond.)

The third edition of this work, issued in 1885, was accepted generally as a nearly perfect text-book, so far as obstetrics was then understood. But advances have been so decided in several particulars since then that the fourth edition, just issued, is so different from the third as scarcely to be recognized as a successive edition of the same work. Especially is this so with reference to the operative procedures in midwifery. The most noticeable changes, perhaps, relate to such operations as Cæsarian section, embryotomy, etc. In all respects, the present edition has been made to represent all the established practices of the most recent experiences; so that it is still the excellent, reliable and advanced book on midwifery, and well-arranged for the Professor's guide and the student's text-book.

System of Practical Therapeutics. Edited by HOBART EMORY HARE, M. D., Professor of Therapeutics and Materia Medica. Jefferson Medical College, etc. Assisted by WALTER CHRYSTIE, M. D., Formerly Instructor in Physical Diagnosis in University of Pennsylvania. VOL. III. Diseases of the Skin—of the Nervous System—of the Genito-Urinary Apparatus—of the Eye—of the Ear With Illustrations: Philadelphia; Lea Brothers & Co. 1892. Large 8vo. 1352 pages. For sale by subscription only. Price per Volume, Cloth, \$5; Leather, \$6; Half Russia \$7.

It is an editorial and a publisher's triumph to issue three such massive, magnificent, thorough, original volumes in one year. While we cannot avoid the remark that the selection of authors appears a little sectional, so far as avoidance of Southerners is concerned, it must be acknowledged that able men have been chosen; and yet some of them are little known to the medical public outside of the communities in which they live. But beyond this geographical exclusion as to authors, we have nothing but words of commendation to express regarding both the design and the make-up of the System as now completed. Of course there are some points that the reader would have been glad to see more fully discussed, but it is beyond reason to suppose that some items did not escape the authors. For instance, neither

the preparation nor the dose of *veratrum viride* is referred to in the section on puerperal eclampsia, although the implication of the author, Dr. Hirst, is that it is to be recommended. A little too summary dismissal is made of pilocarpine in the same troubles in saying that "it is no longer employed by experienced and educated obstetricians," while in reality there are some eminently *successful* obstetricians who are unwilling to give up its use in selected cases of puerperal eclampsia, as also some cases of ordinary uræmic convulsions, etc. But, as a whole, this *System* covers the entire range of therapeutics, both medicinal and non-medicinal, and supplies a want felt by practitioners everywhere, as evidenced by the phenomenal demand for the work as soon as issued.

Spectacles and Eye-Glasses—Their Forms, Mounting and Proper Adjustment. By R. J. PHILLIPS, M. D., Instructor in Diseases of the Eye, Philadelphia Polyclinic, etc. With 47 Illustrations. Philadelphia: P. Blakiston, Son & Co. 1892. Demi 8vo. Pp. 97.

This little brochure is a very much needed one for popular reading, in order that the common errors of vendors, etc., may be timely noted by the purchasers of glasses or spectacles, so as to be corrected. All oculists would do well to have such an authority as this book for their guide, and jewellers, etc., who sell spectacles, eye-glasses, etc., should carefully read it in order to learn how to adjust them. It is an interesting and good guide book.

Cardiac Outlines for Clinical Clerks and Practitioners. By WILLIAM EWART, M. D., Cantab., F. R. C. P., Physician to St. George's Hospital, etc. With 62 Illustrations. G. P. Putnam's Sons. New York and London. 1892. Cloth. 12mo. Pp. 170. Price, \$1.50. (For sale by West. Johnston & Co., Richmond.)

The full title reads, in addition to the above, "*And First Principles in the Physical Examination of the Heart for the Beginner.*" The fact is, that for student, practitioner, or professor, this is the book long needed whenever it is essential to locate a cardiac murmur or sound, and to get, at a glance of the eye, its full explanation. The "illustrations" are, for the most part, graphic charts, with foot-note explanations, which describe and explain the location and direction of an auscultatory or percussion sounds. This book will be a great help to the diagnostician.

Clinique des Maladies du Systeme Nerveux. M. le Prof. CHARCOT. (Published under direction of GEORGES GUINON, Chef de Clinique Hospice de la Salpêtrière.) Tome I. Avec 47 Figures et 3 Planches. Paris: Progrès Médical, 14 Rue des Carmes. 1892. Paper. 8vo. Pp. 468. (From Publishers.)

This is the first volume of several to appear giving the more important lectures, experiments, notes and observations of Prof. Charcot concerning diseases of the nervous system during the two years begun November, 1889. While each of the 23 sections is valuable to the science of neurology, still they are so arranged as not to form a systematic treatise. Perhaps the sections of most general interest are those (13 and 14) relating to diabetic paralysis—describing some of the nervous accidents secondary to the diabetic constitution. Attention is drawn to the fact that the term pseudo-tabes is improper, for in most of the observed pseudo-tabetic cases (alcohol, beriberi, etc.), it is the gait of the step that has been noted, and not true ataxia. But the other sections will be found of special interest in accordance with the special case that may occur in practice simulating any of the cases forming the text of the lectures by Prof. Charcot.

Diseases of Women. A Manual of Non-Surgical Gynæcology designed especially for the use of Students and General Practitioners. By F. H. DAVENPORT, M. D., Instructor in Gynæcology, Harvard Medical School. Second edition. Revised and Enlarged. Philadelphia: Lea Brothers & Co. 1892. 12mo. 314 pages. 107 illustrations. Cloth, \$1.75.

This book is scarcely needed by the specialist, nor can it be adopted as a text-book for colleges. But it is the very book that the great majority of practitioners have long wanted for the every day run of cases requiring local treatment of non-surgical kind. It tells of methods of examination, what to do in cases of amenorrhœa, scanty menstruation, menorrhagia, dysmenorrhœa, uterine displacements, chronic inflammatory conditions of the uterus, common affections of the vulva and vagina, metrorrhagia, diseases of the ovaries and tubes, pelvic peritonitis and cellulitis, etc. It tells also of the necessary instruments and appliances for the ordinary diseases of women. In short, it is devoted to the local non-surgical diseases of women—leaving surgical diseases for the larger books, which too generally omit reference to the very items most commonly needed by the ordinary general practitioner. To announce the book is to tell all about it.

Text-Book of the Practice of Medicine. By R. C. M. PAGE, M. D., Professor of General Medicine and Diseases of the Chest in New York Polyclinic, etc. New York: Wm. Wood & Co. 1892. 8vo. Pp. 568. Red Parchment Muslin. \$4. (For sale by West, Johnston & Co., Richmond.)

Dr. Page, as the author of a "Chart of Physical Signs of Diseases of the Chest," of a "Hand-book of Physical Diagnosis of Diseases of the Organs of Respiration and Heart," etc., has shown his knowledge of the practical needs of students and practitioners and his ability to supply them. The *Text-book* now presented is to supply the demand of such for a work that presents all the facts known in the branch of Practice shorter than the voluminous books on the subject, and yet fuller than the small works now being issued simply for the purpose of enabling the student to prepare himself, parrot-like, to answer examination questions. Much space is saved by the exclusion from the text of bibliographical references and foot-notes, and by the avoidance of discussion of debatable matter; so that facts, as far as known, fill the book, which is a most excellent one. A useful addition to the make-up of the book is the addition of some 40 blank-paged leaves for notes, etc. For the practitioner, the work is thoroughly practical—special attention being always given to points of diagnosis and treatment.

Diseases of the Stomach. By DR. C. A. EWALD, Extraordinary Professor of Medicine, University of Berlin, etc. *Authorized Translation from the Second German Edition, with Special Additions by the Author.* by MORRIS MANGES, A. M., M. D., Attending Physician to Outdoor Department, Mount Sinai Hospital, New York City, etc. *With 30 Illustrations.* New York: D. Appleton & Co. 1892. 8vo. Pp. 497. Cloth. (From Publishers.)

The purchaser is impressed by the elegance of publication on opening this book, and such excellence is well fitted to such a work as this one is. It is a translation of Vol. II of the author's treatise. Vol. I of the original treats of the physiology of digestion, and hence is entirely independent of the work now presented the American edition. While this American edition states that it is a translation of the Second German, still the manuscripts of Dr. Manges were submitted to the author before being handed to the publishers; and Dr. Ewald states himself that he has made many additions—thus including the very latest investigations on the subject. Hence the present work practically

represents the Third German Edition, which is just now about to appear. Many foot notes by the translator also aid in bringing the work up to the very latest information. The treatise consists of twelve lectures—Lectures I and II are devoted to methods of examination of the stomach, etc. Lectures III and IV describe stenoses of the cardiac and pyloric orifices, etc. Lecture V is given up to gastric cancer, and VI to gastric ulcer. Lecture VII speaks of acute inflammations of the coats of the stomach, and VIII chronic inflammations. Lectures IX, X, and XI are taken up with the neuroses of the stomach. Lecture XII shows the correlation of the diseases of the stomach to those of other organs. The work is thoroughly practical, and the physician who does not secure and carefully read it will deprive himself of a most important help in the treatment of diseases of the stomach.

Diseases of the Nervous System. By JEROME K. BAUDUY, M. D., LL.D., Professor of Diseases of the Mind and Nervous System and of Medical Jurisprudence, Missouri Medical College, etc. *Second Edition.* Philadelphia: J. B. Lippincott Co. 1892. 8vo. Pp. 352. Cloth, \$3. (For sale by West, Johnston & Co., Richmond.)

The first edition of this work, published 1876, was considered excellent authority, fully abreast with the times. But advances in nervous diseases have been so marked since then, that this second edition is entirely a new work. The title page of the book before us, however, is misleading in not stating that it is only the first volume of a work to be completed in two volumes. The book before us devotes four lectures to cerebral circulation—including hyperæmia and anæmia. The succeeding seven lectures describe the various forms of cerebral meningitis. Beginning with Lecture XII, page 184, the remainder of the volume is taken up with the various phases of insanity. To make the work complete, a second volume will be required (and is promised), in which to discuss diseases of the brain and spinal cord, and functional and peripheral affections of the nervous system. What Dr. Bauduy has written shows the work of an observant and experienced authority, and the book before us must be considered as expressive of the very best of the most recent information on the subjects treated of. The work is thoroughly practical and thus well suited to the wants of the general practitioner, as well as useful to the specialist.

Varicocele, and Its Treatment. By G. FRANK LYDSTON, M. D., Professor of Surgical Diseases of Genito-Urinary Organs and Venereal Diseases, Chicago College of Physicians and Surgeons, etc. With Illustrations. Chicago: W. T. Keener. 1892. 8vo. Pp. 126. Cloth.

We have to thank Messrs. Renz & Henry, Chemists, etc., of Louisville, Ky., for the copy of this choice work. It will be remembered that Dr. Lydston stated his appreciation of their "Three Chlorides" thus:—"Wherever I want an alterative and a tonic combination, the 'Three Chlorides' is my favorite formula." The book, however, is for sale by the publisher. But turning attention to the book itself, it presents in a concise and comprehensive manner a review of the subject of varicocele and its treatment. The only other comprehensive work on the subject is the monograph by Mr. W. H. Bennett, who, however, limits himself chiefly to the presentation of his own views and methods. So that Dr. Lydston's monograph stands alone as presenting the advanced views of numerous authorities—thus allowing the reader to select for himself that which may be best suited for his patient. Dr. Lydston's monograph discusses every practical point connected with varicocele—its frequency, its anatomical characters, its causes, its symptoms, complications, methods of treatment, etc. The work must find a place in every surgeon's library.

Manual of Skin Diseases, With Special Reference to Diagnosis and Treatment. For the use of Students and General Practitioners. By W. A. HARDAWAY, M. D., Professor of Skin Diseases in Missouri Medical College, and in St. Louis Post Graduate School of Medicine. Small octavo. 440 pages. Cloth, \$3. Philadelphia: Lea Brothers & Co. 1891.

This *Manual* is conveniently arranged to serve students and practitioners as a practical guide in the study of skin diseases. The subjects are arranged alphabetically for quick reference. The descriptions of the diseases are well made, and their causes and diagnoses clearly given, while the sections on treatment of each of the diseases are based mostly on practical experience of many years of the author as a distinguished specialist. After the text, an Appendix A, gives a number of formulæ, etc.; B, gives a diet table; and (unbound) C, a pamphlet of over 30 pages, describes the *Eruptive Fevers*.

Pye's Surgical Handicraft. Illustrated With 300 Illustrations on Wood. First American, from the Third London Edition. Revised and Edited by T. H. R. CROWLE, F. R. C. S., Surgical Registrar to St. Mary's Hospital, etc. Complete in One Volume. New York: E. B. Treat. 1892. 8vo. Pp. 594—xx. Leather, \$4. Cloth, \$3.50. (From Publisher.)

This book will be specially appreciated by the general practitioner of medicine who has just enough of occasional surgery to do for him to wish that he had more experience in it, and by the beginner in surgery who seeks to familiarize himself with the details of operations, etc. As its full title indicates, this is "a manual of surgical manipulations, minor surgery, and other matters connected with the work of house surgeons and surgical dressers." It is not an elementary work in the usual sense of the term, but is the valuable companion work of the systematic treatises on surgery. It is the very work wanted by most practitioners in accurately describing the details of what is directed to be done, even down to the preparation of the patient, etc., for operations. An appendix contains some useful formulæ, etc. It occurs to us that the marginal notes on the pages might be omitted, and thus allow more print of text to the page, reducing the number of pages and thus the cost of future editions. But this is a small matter, as compared to the special utility of the work itself.

Editorial.

Medical Society of Virginia.

The 23rd Annual Session, to be held at Alleghany Springs, Montgomery county, Va., September 13th, 14th, 15th, and probably a part of the 16th, promises to be a most excellent session. The Committee on Dr. Hunter McGuire's Prize Essay of \$100 for the best of worthy essays offered on *Tetanus* has been appointed, and is now at work examining the two in hand, signed respectively "Non Sine Semine," and "Qui Niminus Probat, Nihil Probat." The Committee will report during the night session of September 13th. The list of papers announced in the recently issued circular of the Executive Committee is unusually full, and their titles, in connection with the announced authors, give the papers special interest. In addition to the "Ad-

dress by the President," Dr. H. Gray Latham, of Lynchburg, and the "Address to the Public and Profession," by Dr. Jacob Michaux, of Richmond, the subject for general discussion—"Vertigo"—will be introduced by a paper by the appointed Leader, Dr. Elliott T. Brady, of Marion, who will be followed by invitation by remarks by Dr. Landon Carter Gray, of New York city. Others will speak on the subject in the order of their recognition by the Chair. The authorized titles of other papers announced are:

Dr. Wm. Edward McGuire, Richmond, Va. *Subject*—"Appendicitis."

Dr. R. S. Martin, Stuart, Va. *Subject*—"Laparotomy and the Good Accomplished by it in Gynæcology."

Dr. S. W. Dickinson, Marion, Va. *Subject*—"Some New Ideas that are Old."

Dr. L. H. Keller, Luray, Va. *Subject*—"Necessity of Prompt Action in Cases of Placenta Prævia, with Report of Cases."

Dr. Phillip Taylor, Richmond, Va. *Subject*—"Some Ocular Diseases in Children."

Dr. C. W. Gleaves, Wytheville, Va. *Subject*—"Mysteries of Medicine."

Dr. M. W. O'Brien, Alexandria, Va. *Subject*—"Injuries of the Knee: their Treatment and Results, with Special Reference to the Prevention and Cure of Suppurative Action in and About the Joint."

Dr. C. M. Blackford, Lynchburg, Va. *Subject*—"The Causative Relations of Bacteria to Disease."

Dr. Alexander Duane, No. 25 E. 31st st., New York, N. Y. *Subject*—"Common Sense in the Treatment of Discharge from the Ear."

Dr. L. G. Pedigo, Roanoke, Va. *Subject*—"Some Uses of the Iodides."

Dr. Joseph A. White, Richmond, Va. *Subject*—"Cataract."

Dr. F. M. Brooks, Fairfax Station, Va. *Subject*—"Some Remarks on the Continued Administration of Digitalis, Illustrated by the Report of a Case."

Dr. A. Vander Veer, Albany, N. Y. *Subject*—"Uterine Hæmorrhage and Present Method of Treatment."

Dr. Joseph Price, Philadelphia, Pa. *Subject*—"Surgical Management of Fibroid Tumors of the Uterus."

Dr. G. Betton Massey, Philadelphia, Pa. *Subject*—"Modern Electrical Methods as a Substitute for Surgery in Certain Pelvic Affections."

Dr. Irving C. Rosse, Washington, D. C. *Subject*—"Sexual Hypochondriasis and Perversions of the Genesic Instinct."

Dr. Samuel J. Fort, Ellicott City, Md. *Subject*—"What Shall be Done with the Imbecile?"

Dr. Wm. Lee Howard, Baltimore, Md. *Subject*—"Hypnotism as a Therapeutic Agent."

The following were received too late for incorporation in the Announcement of the Session:

Honorary Fellow, Dr. George Tucker Harrison, of New York, N. Y. *Subject*—"Remarks upon Gonorrhœa in the Female."

Honorary Fellow, Dr. Wm. W. Parker, Richmond, Va. *Subject*—"Woman's Place in the Christian World—Not Qualified for Medicine or Law."

Dr. Samuel T. Earle, Baltimore, Md., Fraternal Delegate from the Medical and Chirurgical Society of Maryland. *Subject*—"Colotomy for an Artificial Anus—with a Report of a Case of Resection of a Portion of the Sigmoid Flexure for Restoration of the Natural Passage where an Artificial Anus had Existed."

No special rates could be made with Railroads, etc., as they all sell "Summer Excursion Round Trip Tickets" from their prominent depots of the Atlantic States to Shawsville—the depot for Alleghany Springs—on the Norfolk and Western Railroad, good until October 31st. Through the courtesy of the Proprietor of the Springs, Capt. C. A. Colhoun, the per diem board charge for guests, etc., during the session will be only \$1.50 per capita, including transportation from Shawsville to the Springs and return.

The Exhibition of Surgical Instruments, Pharmaceutical Products, etc., promises to be a special attraction. Parties wishing space should apply to Capt. C. A. Colhoun.

Dr. Charles V. Carrington, Resident Physician at the Springs, and a Fellow of the Society, is Chairman of Committee of Arrangements.

Dr. Wm. P. Turner, of Fergusson's Wharf, Va., is Chairman of the Committee on Nomination of Applications for Fellowship. After September 6th, address all applications for him and for the Treasurer, Dr. Richard T. Styll, of Hollins, Va., to Alleghany Springs, Va. We are glad to learn that many of the doctors, etc., in attendance will be accompanied by their wives, daughters, etc.

The Medical Examining Board of Virginia

Will complete its second quadrennial term December 31, 1892. It will be an important duty of the Medical Society of Virginia, during its approaching session, to nominate for commission thirty two of its resident Fellows to serve the third quadrennial term, to begin January 1st, 1893. It would be less than duty did we not record in this general manner for the profession of Virginia their appreciation of the self-sacrificing labors, and their esteem of the marked ability which has characterized the present Medical Examining Board of Virginia. Indeed, from its organization, in 1884, there has been a remarkable earnestness of purpose and fidelity to duty conspicuous in all of its successive members. Under the successive presidential direction of Drs. Wm. C. Dabney, H. Gray Latham, Hugh T. Nelson, and Hugh M. Taylor, the Board has passed through the trials of experiment and criticism until it now stands forth before the American profession as the guide for other States.

None is in better position than we to recognize and appreciate the great good the Virginia Board has done the profession; and, of course, to elevate the standard of professional attainments is to advance most decidedly the interests of citizens in general. Colleges whose graduates are to come to Virginia have everywhere become more thorough in the education of their students. Culpable ignorance on the part of those about to undertake the duties of physicians no longer exists; and the rusty professional autocrats of their respective communities, have been forced by the better education of their juniors, to study and keep up with advances in medical science.

During the term of the present Board, under the Presidency of Dr. Taylor, it has been called upon, on several occasions, to take very positive grounds, and to be always on the watch lest concealed efforts of a few quacks and charlatans, and many ignoramuses in this and other States, did not have effect in securing legislation and rulings of courts inimical to the interests of education and honesty in the profession. But with a spirit of devotion to the true interests of their cause that does not always characterize the action of committees or boards commissioned for general good, the members of the existing organization have liberally given money, influences, labor, and time, in order that the demands of the profession might be sustained.

The present Board will hold its last session during the session of the Medical Society of Virginia; and if it should

recommend certain actions by the Society, we trust that the Fellows will yield to the suggestions, which will have been maturely considered before their presentation.

The Board will hold examinations of applicants for license to practice medicine, etc., in Virginia at Alleghany Springs, Va., September 14th and 15th, 1892, beginning about 8:30 A. M., Wednesday, September 14th. But as all the trains of Wednesday arrive at Shawsville too late for any one to be in time for the morning meeting, and as it is absolutely required that candidates for examination shall begin with the first examination, *it is very important that such candidates shall arrive at Alleghany Springs not later than Tuesday night, September 13th.* The President of the Board, Dr. Hugh M. Taylor, and the Secretary, Dr. Jacob Michaux—both of Richmond, Va.—will arrive at the Springs Tuesday morning, so as to be on hand in full time to answer all questions of those who may offer for examination.

Prepare for the Cholera Epidemic.

The epidemic of cholera now sweeping over Europe is apparently directing its march to this continent. Whether it will reach the United States this year or next, no one can predict. But the threatenings are momentous enough for us to act on the principle, "In time of peace, prepare for war." "To be forewarned is to be forearmed"—provided, of course, those forewarned take heed.

Dr. Page's *Practice of Medicine* (page 393 *et seq.*)—the latest representative of authoritative views on the subject—states that cholera depends upon a specific poison or virus, the germ of which is Koch's comma bacillus, discovered in 1883. These bacilli are found only in the intestines, where they arrive by being swallowed in some vehicle—such as water, fruit, milk, or articles of food. Cholera bacilli are contained in the patient's fecal discharges, which must undergo some change not yet well understood, but which is greatly influenced by the soil, before they become virulent—thus resembling the dejections of typhoid fever. A certain amount of summer or warm weather heat is necessary for the production of the disease. The comma bacilli appear to thrive best at a temperature of from 86° to 104° F. The epidemic disease does not extend by currents of air, but spreads by being carried about by patient's clothing, and the like; and hence is found along the various lines of travel, water courses, in crowded cities, and thickly popu-

lated countries. Mountainous regions are less subject to the affection than low flat lands. Defective drainage, over fatigue, imprudence in diet, and intemperance all predispose to it.

The period of incubation is variable—generally from one to three days elapsing after exposure before the disease manifests itself. But it must not be overlooked that on vessels leaving infected ports without cholera on board, the first case of the disease has occurred as late as two or three weeks, even twenty-six days.

Nothing is more clearly demonstrable than that well directed, vigorous measures—compulsory, if need be—can do much to prevent, or else to limit the spread of an epidemic of cholera. But after the development of the disease in a given case, it is generally too late to do much for the patient. Even with the best of medical treatment, the mortality is from 30 to 50 per cent. of cases attacked.

So important do we regard the matter of prevention that, at the risk of being a little tedious, we will quote some facts from Flint's *Practice* (because at hand), which are well sustained by like facts in the records of other authorities:

In 1866, about 1,000 cases of cholera occurred in 362 houses, widely separated, in different parts of New York city. As soon as the disease was reported, the house was instantly disinfected, and all appreciable local causes of cholera removed. In no instance did the disease extend beyond the house in which a case occurred. Such a result shows that we can prevent cholera from finding an abiding place in our homes.

In addition to the removal, as far as possible, of all such causes, prevention involves prompt attention to the diarrhœa which, in the great majority of cases, precedes the attack of cholera. This premonitory diarrhœa is amenable to simple measures of treatment, and thus the supervention of cholera is preventable in a very large per cent. of individuals who have to remain in an infected district. In fact, as Dr. Flint states it, "Except the *very small* proportion of cases in which cholera is not preceded by diarrhœa, it may, with almost absolute certainty, be prevented."

But "very many pay no attention to the premonitory diarrhœa through ignorance, and not a few of those better informed neglect it through recklessness, or because they cannot appreciate the fact that a disorder so slight and ordinary can be a precursor of a malady of such gravity

as cholera." "The only effectual plan is to organize a sanitary police, and to provide for one or two domiciliary visits daily, at every house within the limits of the epidemic, the purpose of the visits being to inquire if any one be affected with diarrhœa, to impress the importance of immediate attention to it, and, when circumstances render it necessary, to supply appropriate remedies at once." "Abundant proof of the successful operation of the system of the house-to-house visitation was furnished by its practical results in London and other towns in Great Britain during the epidemic of 1849."

In view of such well sustained facts, if our municipal, State, and National authorities will combine their essential timely help in establishing competent and conscientious corps of sanitary police, and allow them a sufficiency of power and of means, there would be no cause to become frightened by the approach of the scourge.

Webber-Pepsin, S. & D.

As a climax to the active rivalry of pepsin manufacturers for the past few years, Messrs. Sharp & Dohme announce in this issue of our journal the Webber-Pepsin (S. & D.); standard 1 to 6000, and claim that it is the purest and most active pepsin ever introduced. Webber-Pepsin (S. & D.) is not a peptone pepsin, yet it is perfectly soluble, inodorous, and is most palatable. Purity, palatability, potency and permanency, are all vouched for by the manufacturers of this high-test pepsin; and as they offer samples to the profession, our readers can judge of its virtues for themselves. The fact, stated simply as a matter of scientific interest, that by the Webber process, pepsin has been produced that will digest 20,000 and even 30,000 times its weight of coagulated egg-albumen, clearly demonstrate the excellence of this improved process. The standard of 1 to 6,000 is such a great advance that Messrs. Sharp & Dohme content themselves with that digestive power now. Higher power is gained only at abnormally increased expense. We await with interest the further development of the pepsin question.

The Chicago Medical Recorder,

Edited by Dr. Archibald Church, and previously published by W. T. Keener, of Chicago, is now being published by the M. H. Kauffman Medical Publishing Company.

Women Eligible to Membership in British Medical Association.

During the recent session of the British Medical Association, the previous ruling excluding women from membership was revoked. This is but another "handwriting upon the wall." The problem as to what is to be done should educated female physicians offer for practice in our communities, or apply for membership in our State Societies, etc., is working itself out, regardless of opposition or favor.

"The mover of the resolution in the British Association, Dr. Galton, said times had changed in the past twenty years, and where, in 1878, when the article was adopted, there were only eight women doctors in Great Britain, there are now 135. He said the battle against women in the medical profession was over, and they should extend the hand of fellowship to the women. The resolution was carried by a large majority. The seconder of the resolution wanted it amended to read in favor of the admission of more women into the profession. There are 130 women students in the London school this year. There are also two schools in Edinburgh, two in Glasgow, and one in Dublin."

Suit Against a Hospital.

Alexander Coblitz, the ten-year old boy who sued the New York Hospital for \$50,000 for the loss of his leg, and who was beaten on the technical ground that the institution was a charitable one, and public policy did not permit such suits when the physicians were carefully selected, has decided to appeal his case and get a determination on this question in the higher courts. The main ground for appeal is that if the hospital agreed to take pay for his treatment it cannot claim immunity because it was a charitable institution. Suits have also been brought against the surgeons individually, and the attempt made to fix on some one the liability for what is alleged to have been great negligence.

The Charlotte Medical Journal,

Edited by Drs. E. C. Register and J. C. Montgomery, is a handsomely issued, large size octavo, of about fifty-six reading pages monthly journal, begun with July, 1892, issue. Price, \$2.50 a year. This gives to North Carolina two journals—the *North Carolina Medical Journal* being published in Wilmington. The new *Journal* has our best wishes.

American Electro-Therapeutic Association.

A very full programme is announced for the meeting in New York, at the Academy of Medicine, October 4th, 5th, and 6th. "The Relative Fœticial Value of the Different Currents and their Application to Ectopic Gestation," will be discussed by prominent gynæcologists and electricians, as also "Cataphoresis and its Practical Application as a Therapeutic Measure." Papers are announced by Drs. Engleman, Adams, and Hulbert, of St. Louis; Wm. F. Hutchinson, of Providence, R. I.; Franklin H. Martin, of Chicago, Ill.; A. Laphorn Smith, of Montreal, Canada; R. J. Nunn, of Savannah, Ga.; Thos. W. Poole, of Lindsay, Ontario; C. Eugene Riggs, of St. Paul; W. J. Herdman, of Ann Arbor, Mich.; D. S. Campbell, of Detroit, Mich.; G. Betton Massey, of Philadelphia; Henry D. Fry, of Washington, D. C.; H. E. Hayd, of Buffalo, N. Y.; J. H. Kellogg, of Battle Creek, Mich.; C. G. Cannaday, of Roanoke, Va.; Ernest Wende, of Buffalo, N. Y., and W. J. Morton, A. H. Goelet, A. D. Rockwell, L. C. Gray, Robert Newman, E. Cutter, F. Peterson, G. M. Hammond, F. Van Raitz, of New York, and others. Dr. J. Mount Bleyer will give a lecture with demonstrations on "The Phonograph and Microphonograph, the Principles Underlying Them, and their Uses in the Sciences." The social part of the programme includes many pleasant surprises.

A Point in Expert Evidence.

In a late railroad case in New York, the court said in regard to expert evidence: "A physician, after testifying to his personal observation of a bruise in the breast of plaintiff, caused by the accident, and to a subsequent inflammation and abscess, occurring after child-birth, in the same place, can be allowed to state that, in his opinion as an expert, the latter were caused by the former." The question presented, therefore, is whether the physician, after testifying to his personal observation of the bruise and the fracture, and the subsequent inflammation and abscess, in the same place, could state that, in his opinion as an expert, the latter were caused by the former. The opinion of a medical expert, based upon facts within his own knowledge and observation as to the nature of the affection from which a party is suffering, and whether it was produced by violence or disease, has long been held competent by this court.

Dr. Joseph Price's Prize of One Hundred Dollars.

Dr. Joseph Price, of Philadelphia, Pa., pays the Medical Society of Virginia a special compliment in offering a Prize of One Hundred Dollars, to be awarded the Fellow of the said Society who may present, during the session of 1893, the best of the worthy essays on "The History of Surgery and Surgeons in Virginia." Dr. Price, as is generally known, is a Virginian by birth, and adds this to his many former expressions of inborn love for his native State and esteem of her professional renown. The Essays offered in competition are to be dealt with, in all respects, as are the Essays offered for the Dr. Hunter McGuire's Annual Prize. Fuller announcement will be made during the session of the Society, at Alleghany Springs this month, with reference to this Prize offer for the session of 1893.

The above paragraph is repeated from the August issue of the *Monthly* because of its special interest to Virginia practitioners who will receive a copy of this number.

Christian Science as a Ground for Divorce.

It seems generally to be believed that laxity of divorce is a peculiarity of the Western States, and that Illinois and South Dakota are the localities specially favored by those who desire to be freed from marital incompatibility without much regard being paid to the reasons offered. It is doubtful, however, if any State is more lax than the staunch old Puritan State of New Hampshire. One of the grounds in this Commonwealth is treatment such as seriously to injure health or endanger reason. The husband, in a recent case, informed the court that his wife was a believer in Christian science, and practised as a faith-healer. As a result, he became morose and despondent, so that physicians believed if matters went on his reason would be endangered and his health seriously injured. The divorce was promptly granted.

Instruction in Orificial Surgery.

The sixth annual class for private instruction in orificial surgery will be held in the amphitheatre of the Chicago Homœopathic Medical College, corner of Wood and York streets, Chicago, during the week beginning September 12th. The class is non-sectarian. For particulars, address E. H. Pratt, M. D., Room 56, Central Music Hall, Chicago.

The Mississippi Valley Medical Association

Will hold its Eighteenth Annual Session in Cincinnati Oct. 12-14, 1892. An excellent program, covering the entire field of medicine, will be presented. An Address on Surgery will be delivered by Dr. Hunter McGuire, of Richmond, Va., President of the American Medical Association. An Address on Medicine will be made by Dr. Hobart Amory Hare, of Philadelphia. The social as well as the scientific part of the meeting will be of the highest order.

The Mississippi Valley Medical Association possesses the advantage that its organic law is such that nothing can be discussed during the sessions except science. All ethical matters are referred, together with extraordinary business, to committees, and their decisions are final. The Constitution and By-Laws are comprehensive, yet simple. Precious time is not allowed the demagogue or the medical legislator. The members of the Pan-American Medical Congress will hold a conference at the same time and place. Dr. Charles A. L. Reed, Cincinnati, President; Dr. E. S. McKee, Cincinnati, Secretary.

The Tri-State Medical Society of Alabama, Georgia, and Tennessee

Will hold its Fourth Annual Meeting in Chattanooga, Tenn., October 25, 26, and 27. It promises to be even a more successful meeting than the one last year; and this is not surprising when we know that Dr. W. E. B. Davis, of Birmingham, Ala., is President, aided by that most indefatigable worker as Secretary, Dr. Frank Trester Smith, of Chattanooga. Whoever proposes to read a paper, report a case, or present a specimen, should at once notify the Secretary of title of paper, etc. Examination of the List of the over 200 members shows that the membership is *not* confined to the three States mentioned in the title of the Society. In fact, "any graduate of a reputable medical college, who is in good standing in his profession, shall be eligible to membership." Annual dues, \$2. "No paper shall be read before this Association that has been previously published."

Dr. L. S. McMurtry, of Louisville, Ky.,

Ex-President of the Southern Surgical and Gynæcological Association, and a gynæcologist of national fame, has been elected an Honorary Member of the British Gynæcological Society—a high honor, worthily bestowed.

Coulter's Combined Vaporizer and Inhaler.

Whilst eminent specialists for lung and chest diseases in America and Europe, among them Drs. Beverley Robinson, and A. L. Hall, New York; Dr. Julius Sommerbrodt, Breslau, and Dr. J. Scheinmann, of the Laryngological Polyclinic at Berlin, recommended creasote in the treatment of pulmonary diseases, we beg to draw our readers' attention to a new Vaporizer and Inhaler recently patented by the Coulter Vaporizer Manufacturing Company, 823 Broadway, New York. It is claimed that not only has inhalation, as a rational method for carrying medication to the diseased respiratory organs, been perfected by this instrument, but also by its means such remedies as creasote, eucalyptus oil, and oil of Southern pine needles, are completely vaporized; and in such condition can easily be inhaled, even by children, to the remotest recesses of the lungs, whereby we not only avoid interference with digestion, but procure a direct local effect upon the diseased organs. The instrument has been tested, and is recommended to the medical profession by leading physicians.

Trusts for the Care of Graves.

Bequests in trust to care for and maintain graves are usually supposed to be legal and valid, yet, as they are generally perpetual, they cannot be sustained unless they are deemed to be charitable. The courts have generally decided that such bequests are not a charitable use, and so, unless there is special legislation in the different States, it will usually be held that the bequests are void. It is desirable that in some way the laudable wish to care for the remains of the dead should be carried out, and legislation is now and then being enacted for this purpose. In Pennsylvania, at the last session, a law was passed authorizing bequests to cemetery corporations, upon condition that the leave of the court be obtained as to the form of the investments.

Dr. Karl von Ruck's Sanitarium "Hotel Belmont,"

At Asheville, N. C., was destroyed by fire during the latter part of August. About 175 guests and patients were in the building at the time the fire began, and many of them made narrow escapes. When Dr. von Ruck can make satisfactory arrangements for another building, etc., he will announce the fact.

The Alice Mitchell Case, in Memphis.

After a most careful investigation, before the Shelby County Criminal Court, Miss Alice Mitchell, who killed her intimate friend and companion, Miss Freda Ward, without previous intimation or cause, has been adjudged insane, and committed to an asylum. The *Memphis Medical Monthly* for August, 1892, devotes 50 pages to the report of the medico-legal examination relating to the fact of her insanity. Her mother had puerperal insanity; one of Mrs. Mitchell's uncles was insane; so was one of her brothers, and so were several of her first cousins. The report in the *Memphis Medical Monthly* is full enough to confirm the view that Miss Alice was a "sexual pervert" and was planning to marry her victim.

Dr. W. E. B. Davis.

Who moved to Rome, Ga., last winter to assume partnership with Dr. Holmes, in the surgical management of the Sanitarium there founded, has resigned his connection with that institution and returned to his old home in Birmingham, Ala., to resume practice with his brother, Dr. J. D. S. Davis. Dr. W. E. B. Davis, as president of the Tri-State Medical Association and as secretary of the Southern Surgical and Gynæcological Association, will be kept busy for a month or two—until after the meetings of these Associations in October and November—in correspondence relating to them. It is important that correspondents should remember his change of postoffice to Birmingham, Ala.

Dr. Hunter McGuire.

The *London Medical Press and Circular* of August 10th, devotes a column to Dr. McGuire—taking as its text his recent election to the Presidency of the American Medical Association. It says: "No man more deserves the honor than the Emeritus Professor of Virginia, to whom it comes unsought, and as the completion of all the honors his professional brethren could give." Such compliments from across the water are pleasing to the many friends on this side of the Atlantic of the distinguished President of the American Association, who, by the way, is just now on his usual summer visit to some European centres.

The Harvard Medical School Association

Has issued an interesting and valuable list of its members, which it will be glad to send to graduates of the Medical Department, in whatever part of the world they may be. The Association was formed about one year ago, and *all* graduates of the School are eligible to membership. The object is to unite all alumni and to advance the interests of the School and of medicine. The entrance fee and the annual assessment are merely nominal.

For Sale—Desirable Location for a Physician.

Impaired health, as a result of la grippe a year ago, compels a well established physician in the Blue Grass section of Kentucky to dispose of his practice and property. See his advertisement, "*Practice, etc., For Sale,*" in this issue, signed M. D., care *Virginia Medical Monthly*. In looking for advertisements, always examine the Index to Advertisements, on the white cardboard between pages 32 and 35, after reading matter.

Sunday Drug Store.

The pharmacists of Danville, Va., have made a good move in determining among themselves to keep one store open in rotation on Sundays—all others of the city being closed except for two hours in the morning and two in the evening of that day. This allows the drug clerks much needed rest, and yet amply supplies all the demands of those who may need medicines on the Sabbath. Other towns and cities would do well to adopt some such system.

The Southern Surgical and Gynæcological Association

Will be held in Louisville, Ky., on November 8, 9, 10. Those proposing to assist in making the meeting a success by the contribution of papers, should notify the Secretary, Dr. W. E. B. Davis, of Birmingham, Ala., at the earliest convenience. Dr. J. McF. Gaston, of Atlanta, Ga., is President.

Eugene L. Crutchfield, M. D., F. S. Sc., Lond.,

Has been appointed Lecturer on Applied Therapeutics in the Baltimore University, School of Medicine, to begin his course of lectures next month.

Messrs. Chas. Truax, Greene & Co., of Chicago,

Will establish a Physicians' Bureau of Service and Information at their offices, 75-77 Wabash Avenue, during the Columbian Exposition, 1893. By registering your name, college, and date of graduation, home address, hotel, or boarding-house, while in Chicago, telegrams and mail will be promptly delivered. This Bureau will render assistance to those legitimately engaged in the practice of medicine and surgery, and their families, in securing boarding, in banking matters under given conditions, etc. In short, the generosity of this firm will be so directed as to make the Bureau the headquarters for registered physicians. For circular of detail, etc., send a stamped envelope to Messrs. Chas. Truax, Greene & Co.

Stevenson & Jester's Liquid Peptones, Bismuth, etc.

There is not a general practitioner who does not find himself in frequent need of peptone, pure subnitrate of bismuth, etc. Disappointment has resulted from the use of such things, but it is because of the impurity or imperfections of the articles. It is especially due, however, to Messrs. Stevenson & Jester, to say for them that their preparations are as perfectly pure as can be made, and disappointment will not follow their judicious use. Read their advertisement (p. 35). Their claim about *Couma* is also specially worthy of attention.

Dr. J. B. S. Holmes, of Rome, Ga.,

Will hereafter resume sole proprietorship, etc., of his most excellent sanitarium. His hospital is most admirably fitted up for the comfort of patients, and the magnificent grounds around the building give to it the advantages of a delightful park. Dr. Holmes is too well known as a surgeon and practitioner of skill and successful results, who looks after every interest of his patients, to need a word of introduction from us.

American Association of Orificial Surgery.

The meeting of the American Association of Orificial Surgeons takes place in Chicago on the afternoons and evenings of September 14th and 15th. This Association is non-sectarian. For particulars, address C. M. Beebe, M. D., Secretary, 742 W. Adams streets, Chicago.

Obituary Record.

Dr. Thomas F. Wood.

Just as the August number of the *North Carolina Medical Journal* was about to be issued, its senior editor, Dr. Thomas F. Wood, of Wilmington, N. C., passed away, after twenty-four hours of suffering, the climax of his fatal disease (aneurism of the arch of the aorta), under which, for six years, he has patiently waited for God's summons. He is at rest, and multitudes of good words and works do follow him. He has builded for himself, by his humble, trusting, Christian life, a home in that mansion prepared for the elect in Christ, and has left behind him a monument in the gratitude and love of those to whom his life and labors were a blessing and an example.—*Postscript to N. C. Med. Jour.*, Aug., 1892.

Dr. Peter Bryce.

The distinguished Superintendent of the Alabama Insane Hospital, at Tuscaloosa, died of Bright's disease, August 14th, 1892. He was born in Columbia, S. C., March 4, 1834. He was elected to establish the Alabama Insane Hospital in 1861. At the time of his death he held the honor of being President of the American Neurological Association. His greatness in his special line of study is recognized everywhere that he was known.

Dr. A. R. Brown Horner,

Surgeon and Medical Director U. S. Navy, died August 8, 1892, at Warrenton, Va., aged 88. Dr. Horner had served sixty-five years and six months in the navy, and at the time of his death was the oldest medical officer, with the relative rank of Commodore. He was three times appointed Surgeon-in-Chief of various squadrons, for many years was appointed on the Naval Medical Boards, and by seniority became Surgeon-General of the Navy.

Dr. Walter Cole,

President of the St. Louis Medical Society, committed suicide at his home in St. Louis, Mo., August 9th. The only known cause was ill health. He was 54 years of age. A widow and four children survive him. He was a native of Virginia.

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Original Communications.

ART. I.—Asiatic Cholera and Cholera Morbus, with Practical Observations on the Treatment of the Latter Disease.

By JOSEPH JONES, M. D., LL. D., of New Orleans, La.,

PROFESSOR OF CHEMISTRY AND CLINICAL MEDICINE IN TULANE UNIVERSITY OF LOUISIANA, ETC.

Mortality Occasioned by Asiatic or Malignant Cholera in New Orleans, La.

Asiatic cholera has played no insignificant part in the grand carnival of disease and death. In 1832, in conjunction with yellow fever, it swelled the mortality of New Orleans to 8,099 deaths, in a population of 55,840, and marked this year as the most terrible in the annals of the city, the death rate reaching the enormous proportion of 147.10 per 1,000 inhabitants.

In 1832, the inhabitants of New Orleans were more than decimated—more than one-seventh of their number were destroyed chiefly by Asiatic cholera and yellow fever.

The Charity Hospital offers the following statistics on Asiatic cholera:

From 1842 to 1860 (18 years), 5,122 cases; 3,402 deaths.

Per cent. of deaths, 66.4.

Total in the Charity Hospital, from 1864 to 1880, 443 cases and 343 deaths. Per cent. of deaths, 77.4.

During a period of 34 years—1844–1880—Asiatic cholera destroyed 11,847 of the citizens of New Orleans; and if we

add to this the number of deaths occasioned by the disease in 1832 and 1833, we have a grand total of 17,187 deaths occasioned by Asiatic cholera.

It is probable that the mortality occasioned by Asiatic cholera was even far in excess of these figures, for we find, upon careful examination of the mortuary records of New Orleans, that during a period of 34 years—that is, from 1844 to 1880—the deaths from bowel affections were as follows:

Cholera morbus,	-	-	-	889
Cholera infantum,	-	-	-	2,408
Teething,	-	-	-	3,430
Gastritis,	-	-	-	743
Enteritis,	-	-	-	6,915
Dysentery,	-	-	-	7,097
Diarrhœa,	-	-	-	8,289
				<hr/>
Total,	-	-	-	29,771

During the same period of 34 years, yellow fever occasioned 28,739 deaths.

It is evident, therefore, that the so-called ordinary bowel affections (diarrhœa, dysentery, cholera morbus, enteritis, gastritis, and teething) actually caused a larger number of deaths in New Orleans than yellow fever.

If we add the 11,847 deaths caused by Asiatic cholera, we have a grand total of 41,618 deaths from these diseases, in which the derangements of the gastro-mucous membrane form the most prominent symptoms.

The continuous and fearful mortality from this class of diseases must be diminished by improved domestic and general sanitation.

CHOLERA INFANTUM.

Total deaths in New Orleans, 1847–1880:

Cholera infantum,	-	-	-	2,236
Tabes mesenterica,	-	-	-	4,311
Convulsions,	-	-	-	2,133
Infantile convulsions,	-	-	-	5,690
Teething,	-	-	-	3,102
Infantile debility,	-	-	-	2,429
				<hr/>
Grand total,	-	-	-	19,901

During a period of 27 years, cholera infantum, tabes mesenterica, convulsions, teething, and infantile debility—diseases peculiar to children and infants—destroyed in the city of New Orleans 19,901.

On the other hand, during the same period (1847–1880), 25,172 deaths were caused by *yellow fever*. The deaths from yellow fever exceeded those caused by the diseases of infancy 5,271.

By what process of reasoning and for what ends does the medical profession at large, and the Board of Health of the State of Louisiana in particular, neglect the consideration of 19,901 deaths from infantile diseases, and concentrate all available skill and knowledge upon a disease which commits its ravages only at comparatively long intervals? Diseases, and all causes of death, should be equally considered by those charged with the conduct of the sanitary affairs of New Orleans and Louisiana.

It is, of course, impossible to determine the exact proportion of the 19,901 infants who perished from improper nourishment and adulterated milk; but that improper and insufficient food, as well as crowding, imperfect ventilation, and exhalations from foul privies and filthy canals and gutters enter as important factors in the production of the grand results, will not be denied.

Cholera infantum is said to destroy annually about 40,000 infants in the United States. This disease stands sixth on the list of fatal diseases, and is largely instrumental in producing the deaths of one-half of the human race between the ages of birth and five years of age.

1. CAUSES OF CHOLERA INFANTUM.

(a) *Dentition.*

(b) *Elevated Temperature.*

(c) *Crowding and the crowd poison of large cities; bad ventilation, especially in tenement houses; the exhalations of gutters, sewers and privies, especially during the hot months of summer.*

(d) *Impure milk, whether derived from sickly, ill-fed mothers, or from imperfectly fed and diseased cows, or from metallic cans.*

(e) *Plomaines engendered in fermenting milk.*

(f) *Specific micro-organisms.*

A. DENTITION AS A CAUSE OF CHOLERA INFANTUM.

In the teething child, the teeth press upon and irritate the extremities of the dental nerves, and the irritation is transmitted by those nerves to the ganglionic cells of the cerebro-spinal nervous system, and from thence to the sympathetic ganglia.

As a result of this irritation, and reflection of the irritation to the gastro-mucous membrane, there is induced—

(a) An enfeebled and excited condition of the ganglionic cells of the cerebro-spinal nervous system, often resulting in irritation and inflammation of the meninges of the brain, hydrocephalus, convulsions, and death.

The truth of this proposition is sustained by the frequency and fatality of convulsions among teething children.

We are all familiar with the restlessness, the tossing of the head from side to side, the dilatation or contraction of the pupils, and the firm contraction of the fingers, especially of the thumbs, which in many cases of cholera morbus precede convulsions and death.

(b) The irritation of the ganglionic centres in the teething child leads to impairment of digestion, loss of tone and power in the alimentary canal, and irritation of the gastrointestinal mucous membrane.

(c) The impaired functions of the stomach and functions of the teething child are indicated by profuse watery, serous, often light colored and highly offensive discharges, often mixed with masses of undigested, fermenting and putrid milk.

(d) Both the liver and kidneys are frequently involved in cholera infantum; and owing to the reflection of the irritation or excitement to the kidneys, the urine sometimes contains grape sugar.

In many cases the functions of the liver are involved to such an extent as to lead to the disappearance of the coloring matters of the bile in the intestinal discharges.

B. ELEVATED TEMPERATURE AS A CAUSE OF CHOLERA INFANTUM.

The cases of cholera infantum occur chiefly during a period of ninety days, embracing the months of July, August and September.

The first five or ten days of continuous elevated summer heat are generally attended in the large American cities—as Boston, New York and Chicago—with the development and spread of this disease.

The effects of elevated temperature are four-fold:

(a) Depression of muscular and nervous forces, leading to debility and perversion of the *functions*, and especially those of digestion and nutrition.

The effects of elevated temperature are most severe upon teething children who have been already debilitated by gastro-intestinal irritation and profuse serous discharges.

Every infant or child is more or less affected and debilitated at all seasons of the year by the process of dentition; hence the protracted heat of summer is most severely felt by this class of the human race. If strong, robust men and women suffer intensely in our large cities from the elevated temperature of summer, and often fall victims to sun-stroke and other conditions resulting from elevated temperature, how much more potent must elevated temperature be in its effects upon infants and children already debilitated and deranged by the process of dentition.

(b) Increase of fermentation and putrefaction in the sewers, gutters, drains and privies, and in the refuse matters, garbage, etc., and in the urine and excrements of animals saturating the streets.

Increased fermentation and putrefaction, during the action of elevated temperature in crowded cities and tenement houses, is necessarily attended by the increased development of noxious gases, such as carbonic acid, carbonetted hydrogen and sulphuretted hydrogen, and by morbid micro-organisms.

In hot weather, in cities, all are more or less affected by

these morbid agencies; but these deleterious effects are especially exerted upon the debilitated systems of teething children.

(c) The increased fermentation and putrefaction of milk, and of all forms of animal food during high temperature.

The change of milk is especially rapid when administered unboiled, in unwashed or carelessly cleaned bottles or vessels.

(d) The debilitating effects of prolonged elevated temperature upon mothers, wet nurses, and cows furnishing milk to teething children.

The effects of elevated temperature in depressing the nervous and muscular forces and in deranging the secretions, are felt to a certain extent by mothers and wet nurses, leading to an alteration and diminution of the quantity and quality of the milk.

C. CHOLERA INFANTUM CAUSED BY CROWDING.

The crowd-poison, bad ventilation, the noxious exhalations of sewers, gutters and privies, and the stagnation of the air during periods of protracted heat in cities.

D. CHOLERA INFANTUM CAUSED BY IMPURE MILK.

Whether derived from sickly, ill-fed mothers or from cows.

E. CHOLERA INFANTUM CAUSED BY PTOMAINES,

Engendered in fermenting or putrefying milk, during the increased heat of summer.

Canned milk may also be a source of much evil from the development of poisonous products.

Carelessness in the cleansing of bottles and vessels used in feeding children may be the source of much harm, and lead to the development of poisonous products capable of deranging digestion and the intestinal canal of teething children.

F. CHOLERA INFANTUM CAUSED BY A SPECIFIC MICRO-ORGANISM,

Is, by a number of toxic micro-organisms, capable of in-

ducing fever, gastro-intestinal derangement, convulsions and death.

This important subject is worthy of the most protracted and careful investigation; and the United States should not limit its efforts and investigations to yellow fever—an exotic and, to a large extent, a preventable disease—but should appoint and support a commission of learned, accomplished microscopists, sanitarians, and physicians for the investigation of this destructive, wide-spread, and annually recurring disease.

Like yellow fever, cholera infantum, in its origin and spread, is largely dependent upon elevated temperature.

SOME PRACTICAL OBSERVATIONS ON THE TREATMENT OF CHOLERA INFANTUM.

(a) Change of air from the crowded city and ill-ventilated houses to the cool and pure air of the sea coast, or elevated mountainous region, or the more sparsely settled districts of the country. Of course, such changes in the surroundings of teething children are only practicable in the cases of those possessed of the necessary means and endowed with the necessary humanity.

I would suggest and urge that sanitariums for teething children should be established along the sea shore, in rural districts, and elevated regions, accessible to all classes, and supplied with all the necessary requisites of medical treatment and wholesome food.

The benevolent endowed with ample means could never do a greater or nobler work than the formation of sanitariums or retreats for teething children.

(b) Milk of the healthy mother or wet nurse will, to a large extent, ward off or mitigate the effects of cholera infantum.

When cow's milk is used, it should be obtained from one healthy cow; it should be carefully boiled; the bottles or bowls containing the milk should be kept at all times scrupulously clean by boiling after each use in feeding the child.

The structure and arrangement of the nipple is also important. When it is possible to teach the teething infant to take its nourishment from the spoon or cup directly, without the intervention of the bottle and nipple, the feeding process is simplified and rendered more cleanly.

A small quantity of *lime water* (*liquor calcis*) added to the milk will prove beneficial in neutralizing the acid conditions of the stomach and aiding as a germicide, and in furnishing an important element of the teeth and bones in the teething child.

(c) Properly prepared beef tea from fresh tender raw beef, to which a few drops of hydrochloric acid have been added, may in many cases be substituted for milk with benefit.

The child may also be allowed to suck the juice of tender rare beefsteak. Ducro's Alimentary Elixir is in high favor with some practitioners, and appears to be beneficial, not only from the salts of beef, but also from the presence of good brandy.

(d) Small doses of calomel, or of hydrargyrum cum creta, are often of marked benefit when judiciously used in the treatment of cholera infantum.

(e) The excessive discharges from the bowels may often be controlled by the judicious use of the subnitrate of bismuth and precipitated carbonate of lime, as in the following :

R _y	Camphorated tincture of opium	
	(paregoric).....	f 3ij
	Tincture of rhubarb	m xx
	Tincture of assafoetida.....	f 3ij
	Tincture of catechu,	
	Tincture of kino.....	āā f 3j
	Precipitated carbonate of lime..	3iv
	Peppermint water.....	f 3iss
	Water sufficient to make in all..	f 3vij

Mix. S. (Shake well.) Dose—One to two teaspoonfuls every one, two or three, or four hours, as may be necessary. Each dose may be more or less diluted with water.

(f). Digestion may be promoted, and the strength maintained by the following combination of pepsine and the phosphates of lime and *tribasic phosphate* of iron :

R Pepsine,
 Phosphate of lime,
Tribasic phosphate of iron.....āā 3j

Mix. S. Administer from 5 to 10 grains of this mixture in a little syrup three times a day after eating.

This mixture should be carefully preserved in well-stoppered bottles, and may be continued for weeks and months with benefit to the child. The phosphates of lime and iron may be added in the proportion of from 2 to 5 grains of each to the boiled milk three times a day. I have in numerous cases witnessed the most beneficial effects in puny, feeble, teething children from the continuous use of the phosphates of lime and iron.

The mothers and wet nurses will also be benefited and strengthened, and their milk rendered more nutritious by the use of pepsine and the phosphates of lime and iron. The hypophosphites may also be employed in the form of the compound syrup with benefit, either with or without strychnine. I have found the following formula valuable in the treatment of children and nurses:

R Tincture of nux vomica.....f3iij
 Compound syrup of the hypophosphites (U. S. P.).....f3vij f3v

Mix. For teething and feeble children, 10 to 20 drops three times a day; for mothers and nurses, from 30 to 90 drops three times a day.

One drop of the tincture of nux vomica, properly diluted, administered three times a day, will prove beneficial in some cases of cholera infantum, by its effects upon the cerebro-spinal and sympathetic nervous systems, and by giving tone and power to the muscular structures of the intestinal canal. Also quinine administered internally, in from one to three grains, three times a day, may prove beneficial in many cases of cholera infantum. Cholera infantum may also be complicated with malarial fever, especially in low, marshy or swampy regions. Sulphate of quinia may also be employed with benefit externally, as in the following liniment:

R Sulphate of quinia ʒj
 Soap liniment,
 Olive oil..... āā fʒij

Mix. Sig.: Use as a liniment. Rub the body, feet, joints, arms and legs of the child from two to four times a day.

The effects of this liniment will be to reduce the temperature, and soothe the child, and induce sleep. We know from practical experience that this liniment is beneficial in all cases of fever in both infant children and adults.

In the case of adults the proportion of quinine may be doubled. Some physicians have denied that quinine thus applied externally has any influence, but I am convinced by the results of extended experience that they are in error. I have, in many cases of malarial and yellow fever, produced the symptom of *quinism* (ringing in the ears, reduction of temperature, and increased fullness of the pulse) by quinine thus applied or rubbed in upon the surface.

The soap liniment, in combination with olive oil, in my experience furnishes the best vehicle for the local application of the sulphate of quinia.

In concluding this brief outline, we would lay stress upon the necessity of furnishing the little cholera infantum patients with abundance and continuous supplies of fresh air and cool water. We would also urge the importance of furnishing mothers and wet nurses with such liberal supplies of wholesome food and drink, as will not only restore the waste occasioned by lactation, but also furnish the necessary nutritive materials for the elaboration of rich, wholesome milk.

156 Washington Avenue.

McArthur's Hypophosphite Co's Syrup (see advertising page 16) is a standard and reliable preparation. It is not a conglomerate mass of poly-pharmacy as some others in the market, but embodies the valuable therapeutical properties of the Hypophosphites of Lime and Soda, without objectionable ingredients.

ART. II.—Tetanus.*

By CHARLES M. BLACKFORD, Jr., M. D., of Lynchburg, Va.

Tetanus may be *defined* as an acute, infectious disease, characterized by tonic contractions of the muscles, or groups of muscles, usually commencing with the muscles of mastication.

As a preliminary to the study of the pathology of tetanus, it will be of value to review the *conditions under which muscular tissue normally contracts, and the phenomena attending its contraction.*

In common with all the specialized tissues, a stimulus is required for it to exhibit its peculiar function, and this stimulus may be applied either to the motor nervous mechanism, or directly to the muscle, for the presence of nerve-fibres seems not to be essential for the response to stimuli on the part of the muscle. If a blow be struck the tendon of the gastrocnemius of the frog, in which, as yet, no nerve-fibres have been detected, a wave of contraction follows in the muscle, which is thought to be due to the direct irritation of the sarcous material by the blow. Another reason for thinking that muscular tissue possesses inherently the power of contracting, independently of nervous influence, is that certain substances applied to the muscle produce contraction, whereas, when applied to the nerve, the result is negative. Thus mineral acids, oxalic and acetic acids (Kühne), the salts of iron, zinc, copper, silver, and lead, and, in addition to these, bile also (Budge), act in very weak solutions as muscular stimuli, while they act on the motor nerves only when concentrated. Gases and vapors generally act as muscular stimuli, but the vapor of carbon bi-

* The Prize Essay submitted under the nom de plume of "Non Sine Semine," which received the Dr. Hunter McGuire Prize of One Hundred Dollars during the Session of the Medical Society of Virginia, at Alleghany Springs, Va., September 13th, 1892. Committee of Examination of Essays Submitted in Competition: Drs. Chas. W. P. Brock, of Richmond, Va.; Thos. J. Moore, of Richmond, Va.; Herbert M. Nash, of Norfolk, Va.; J. Herbert Claiborne, of Petersburg, Va.; and Wm. L. Robinson, of Danville, Va.

sulphide acts only as a nervous stimulus. (Kühne and Jani.)

In addition to these chemical stimuli, a gradually raised temperature excites contraction—this beginning when the temperature reaches about 30°C . and attaining a maximum at about 45°C . (Eckard.) Should the temperature continue to rise, the muscle will pass into the "heat rigor." As before mentioned, a blow will cause contraction, as also will a current of electricity.

The normal stimulus, however, reaches the muscle through its motor nerve. The motor impulse in voluntary movement originates in a motor centre in the cerebral cortex, passes through the corona radiata, the internal capsule, through the decussation of the motor fibres in the medulla, and is transmitted by the direct and crossed lateral tracts in the cord to the anterior roots of the spinal nerves, and thence to the muscle. It will be seen that a chemical, thermal, mechanical, or electrical stimulus may be applied anywhere throughout this long chain, and will be followed by a response on the part of the muscle.

There is one other mechanism to be considered—that of the so-called reflex movements. The arrangement of a reflex is simple, consisting only of an afferent nerve, conveying impressions to the "centre;" the "reflex centre," which receives the impression brought it by the afferent nerve, and responds to it by sending an impulse over the third element—the efferent nerve, which conducts the impulse from the centre to the muscles connected with the particular reflex. It is evident that, to produce a reflex movement, a stimulus can be applied either in the course of the afferent nerve or to the centre itself. Ordinarily, in reflex actions, a stimulus is applied to the terminus of the afferent nerve, by which it is transmitted to the centre. The centre then acts more or less violently, sending impulses over the efferent nerve to the muscles involved. Some reflex centres seem to be normally acted upon directly, and not through an afferent nerve, though they are capable of the usual indirect excitation. An instance of this is the respiratory

centre, whose usual stimulus is an excessive amount of carbon dioxide in the blood, though it can be excited by dashing cold water on the breast of the subject. The response varies somewhat in proportion to the vigor of the stimulus, and the general excitability of the centres may be increased or diminished by various agencies that will be considered further on in this paper.

A stimulus being applied to a muscle under proper conditions, the muscle contracts. It becomes shorter, thicker, and firmer. It loses a little in bulk, its specific gravity is slightly raised, it becomes, strange to say, more elastic; the amount of oxygen consumed, and of carbon dioxide given off by it, are increased, though these are not in a constant ratio. The extractives soluble in alcohol increase, and those soluble in water diminish. Sarco-lactic acid, and a peculiar muscle-sugar called inosite, make their appearance. The temperature rises, and the normal electrical current is stopped or reversed.

But an analysis of the process of contraction, made with the myograph, is even more instructive. We find that after stimulation there is a latent period during which the muscle apparently is unchanged; then contraction commences, goes on to its maximum, and subsides. This contraction commences at the point of stimulation, and moves in a wave-like manner through the muscle in every direction at a rate that varies in different animals and in different muscles of the same animal. In the arm-muscles of man, the rate of progression is from four to five metres per second. (Power.)

Now, this cycle of phenomena requires time for its performance, and a second stimulus may be applied before the effect of the first is lost. If this be applied at the end of the first latent period, it will be seen that after attaining the maximum contraction for one stimulus, the muscle will contract still more as a response to the second; and if these stimuli be repeated at short intervals—too short for relaxation to occur—the muscle will be thrown into a state of *tetanus*, in which the curve of the myogram becomes practi-

cally a straight line, showing that, for all intents and purposes, there is no relaxation. But, strictly, this is not true, for a tetanic muscle emits a clear musical note that is due to its rapid vibration, though these vibrations, while it is in this condition, have so slight an extent, and are so rapid, that we have no means of recording them.

It thus appears that the condition known as tetanus may be produced under perfectly normal circumstances, by rapidly-repeated stimuli, applied without allowing time for relaxation. Many observers think that the ordinary contraction following an impulse of the will is really the physiological tetanic condition.

In treating of the *pathological condition* that is called tetanus, I propose to reverse the usual order in which the subdivisions of the subject are considered, and to take up the *symptoms*, especially their similarity to strychnia poisoning, before discussing the pathology and etiology. This arrangement seems logical, as it is a statement of the premises on which the causation of the disease rests as a conclusion.

Tetanus is usually divided into two classes—*traumatic* and *idiopathic*—to which some pathologists add *trismus nascentium*, though others, among whom is the writer, prefer to class this under the first division. The symptoms of traumatic tetanus are, unfortunately, but too familiar to the medical profession. It may be well, however, to give a summary of them here.

At a varying time after the receipt of the injury, which may be merely an abrasion of the skin, the patient complains of "soreness in the throat." On examination of the wound, it will be seen to look unhealthy, more or less inflamed, and suppurating slightly or profusely. The discomfort in the throat is rapidly followed by constriction in the pharynx, rigid contraction of the masseter muscles, dysphagia, and dyspnœa. The skeletal muscles are next involved, giving rise either to a lateral bending of the body (pleurostotonos), or a backward bending (opisthotonos). The mouth is sometimes drawn outward, and the eyebrows elevated,

giving a sort of grin, called the risus sardonicus. As a rule, no rise of temperature occurs at the beginning of the attack, and may not occur throughout it, though sometimes it rises even as high as 112° F. before death. The reflex excitability is greatly increased, clonic spasms being brought on by dressing the wound, or even a draught of air striking the patient. The intellect is clear to the end, or at least until carbonic oxide poisoning ensues from tonic contraction of the respiratory muscles.

In addition to those enumerated above, there are other symptoms that may be present. Among them are profuse perspiration, obstinate constipation, scanty and high-colored urine, possibly delirium, though this is thought to be due generally, if not invariably, to the drugs used to allay the spasm. (J. Hutchinson, Jr.)

The striking similarity of these symptoms to those of strychnia poisoning cannot fail to impress itself on the observant mind. That this similarity may be clearly shown, a review of the chief phenomena of the latter will be given. After taking a lethal dose of strychnia, or one of its salts, an interval of varying length occurs, which corresponds to the latent period in tetanus. This being past, the patient complains of restlessness, uneasiness, and a sense of impending suffocation, attended by a shuddering or twitching of the muscles. The tetanic convulsions then commence suddenly and violently, involving the muscles of mastication, though usually they are among the last to be affected. Frequently, the patient can speak and swallow during a paroxysm, a condition which rarely or never obtains in pathological tetanus. Excessive thirst is frequently a prominent symptom, thereby marking another point of difference between the two conditions.

But the most characteristic feature of strychnia poisoning is the remission that succeeds the spasm. The patient lies rigid, or in a state of opisthotonos for a time, and then the convulsion passes off, leaving the patient much exhausted and bathed in perspiration. A very slight stimulus will again bring on an attack, showing that there is a hyperæsthetic condition of the reflex centres. The life of the pa-

tient, after the tetanic spasms commence, may, as a rule, be counted in minutes, whereas, in true pathological tetanus life may be prolonged for twenty-four hours or more. This will be explained later.

It is apparent, from this comparison of symptoms, that it is not unlikely that the disease is the result of toxic doses of some agent whose physiological action is like that of strychnia. If this be demonstrated, it will be easy to prevent the disease by preventing the access of the poison, as it is easy to prevent strychnia poisoning by abstaining from the drug.

We will next consider the *post-mortem lesions found in the two conditions* that we have been comparing. These are of little value for diagnostic purposes, but will be used later to demonstrate the etiology.

In *strychnia poisoning*, the lesions are of a variable character, the most constant feature being a marked congestion of the medulla and spinal cord. Now, it is a well-known physiological fact that functional activity occasions an afflux of blood to a part; and as the reflex centres, that are in a state of over-activity, are situated in the cord and medulla, it is more than probable that the hyperæmia is due to the exalted activity of these centres, and is not its cause. According to Spitzka, as quoted by Bartholow (*Mat. Med. and Ther.*), chronic poisoning by strychnia causes disease in the cord, "partly as an insular sclerosis, partly as a hæmorrhagic or non-hæmorrhagic myelitis." In brief, strychnia produces no lesions due exclusively to the drug. The ecchymoses found in the viscera, and the extravasations of blood in the muscles, can readily be explained by the violence of the convulsions.

In tetanus, *microscopical examination* yields yet more scant results. Frequently, nothing abnormal is found, though at times minute hæmorrhages, or even extensive extravasations of blood or serum, can be seen. Other observers report granular degeneration, centres of softening, nuclear proliferation with the formation of fat granules or amyloid bodies. In other words, they report evidence of rapid and extensive

tissue changes; but, as Dercum puts it, "they are, so to speak, the marks of devastation left by the storm."

Summing up this testimony, we find that there are no lesions indicating any specific disease of the nervous system, though the symptoms indicate excessive activity on the part of that system. The disease seems to be a hyperæsthetic condition of the reflex centres, similar to that caused by strychnia.

With this hypothetical pathology in view, let us analyze the symptoms more thoroughly than we have yet done. The patient complains of restlessness and uneasiness in both conditions. In tetanus, there is a spasm of the muscles of the throat; in strychnia poisoning, there is a feeling of constriction of the throat, which seems to indicate the same pathological condition, though differing in degree. In both the temperature rises, but, as has been shown, it is normal for the temperature to rise when muscular action is excited. There is sometimes a profuse perspiration, but this is also attendant on active muscular exertion. In both the mental faculties are unaffected, showing that the higher centres are unaffected by the toxic agent. In both death comes from exhaustion or carbon dioxide poisoning.

That there are agents that exalt the reflex excitability of the spinal centres, is undoubted. Ignatia and quebracho are used therapeutically for this very purpose, and it is not at all impossible, or even improbable, that tetanus may be merely the physiological effect of an agent having similar action.

This brings us to the consideration of the *cause of tetanus*. To within the last few years this has been a *terra incognita* to surgeons, and has proved no exception to the rule that the unknown is terrible. Even so late a writer as Gibson says (*Institutes and Practice of Surgery*, Vol. II, page 474), after stating the old view that it was due to the wounding of a nerve, "On the other hand, it must be confessed that dissection has been frequently unable to reveal to us the source of this inexplicable and most formidable malady."

The fact that the occurrence or non-occurrence of tetanus after an injury bore no relation to the site or extent of the

injury, was an obstacle that the earlier pathologists found difficulty in surmounting, but at length it has been overcome, and the etiology of this serious disease is being cleared up.

In 1884, Nicolaier* observed that the inoculation of mice, guinea-pigs, and rabbits, with small particles of earth, would almost invariably produce tetanus, though, if the earth were previously heated to a temperature of 150° C., this result would not follow. Further investigations made by means of "cultures," were productive of a bacillus which he thought to be the specific cause, though he was unable to isolate it. Rosenbach† found this bacillus in the pus from a case of tetanus, and by experiment confirmed the claims of Nicolaier. Senn‡ has given at length the confirmatory experiments made by many investigators, so that it is unnecessary to repeat them here; but suffice it to say that the consensus of opinion among those qualified to judge is that the disease is caused by a specific bacterium which has received the name of the bacillus tetanus.§

But how does this minute organism produce this result? The answer is not far to seek. It is well known that certain by-products result as an incident to the metabolism of all kinds of organisms. Thus urea, and the almost innumerable products found in the intestinal canal, are by-products resulting from the life of the human organism; morphine is a result of the life-work of the poppy; and, to render the parallel still more striking, strychnia is a product of the cell-life of the *nux vomica*. Similarly, the minute plant, called the bacillus tetanus, finding a soil suited to it in the unprotected wound, grows, and as the result of its life, the alkaloid *tetanine* is produced, the action of which is similar to strychnia. The slower action of tetanine is due to its being more slowly absorbed, for it can be absorbed only so fast as it is formed, and it is of slow formation.

That I may be more readily understood, I wish to give here a brief account of the *methods by which bacterial studies*

* *Deutsche Med. Wochenschrift*, No. 52, 1884.

† *Langenbeck's Archiv.*, B. XXXIV, p. 806.

‡ *Surgical Bacteriology*, by N. Senn, pp. 144-152.

§ See further Lamiasi in *London Lancet*, April 27, 1890.

are pursued, and show the scrupulous care necessary to obtain results that can be relied upon as accurate and of scientific value.

I will begin by describing the nutritive media in which micro-organisms are cultivated. These media differ somewhat from the different organisms. The one most used is a gelatinized beef broth. This is prepared by macerating two pounds of lean beef in one litre of distilled water at a temperature of about 35°C ., until all the nutriment is extracted, skimming off the fat, straining, and then boiling the clear fluid for about an hour to kill any micro-organisms that might be in it. A test-tube or flask must then be "sterilized." This is accomplished by washing in a 1:1000 solution of corrosive sublimate, then in boiled water, and by finally placing it in a steam sterilizer for about two hours. It should now be plugged with clean cotton, and heated to about 200°C . to sterilize the cotton. A higher temperature is required for the dry heat than for steam, because, when bacteria are dried and exposed to heat, their vitality is frequently but suspended, and activity is resumed when moisture again reaches them.

The sterilized test-tube should now be filled about two-thirds full of the sterilized nutrient broth, to which about five per cent. gelatine, also sterilized, should be added. Replace the cotton plug as quickly as possible, and place the whole in a steam sterilizer for some hours, to kill any spores that may have gained admittance during the time of exposure. Now, let the culture soil stand in a warm place for a day or so, and if no micro-organisms develop, it will then be ready for use.

Many experimenters, among whom is the writer, prefer sterilized blood-serum for the medium in making cultures of tetanus; indeed, some claim that nothing else will do. The general mode of preparation is similar to that of the gelatine soil, but more care is necessary to prevent the serum from becoming opaque at the temperature requisite for sterilization.

Supposing that the medium is ready, the next step is to inoculate it with the bacilli. A platinum needle is heated

to a white heat in an alcohol flame, and as soon as it has cooled, is dipped in the pus from which the cultures are to be made, and the culture-tube impregnated. The cotton-plug is withdrawn while the tube is held in an inverted position, and a deep stab made in the gelatine. The cotton is replaced, and the tube restored to an upright position. It is now important that the tube be not exposed to extremes of temperature; indeed, the more uniform the temperature the better.

Should all go well, in about twenty-four hours there will be a faint cloud floating in the gelatine. This is the "mixed culture," for in addition to the specific bacterium of tetanus, there will be found some of the ordinary pus-forming bacteria, especially the staphylococcus pyogens albus or aureus. These liquefy the gelatine, and cause a granular precipitate at the bottom of the tube, which is either gray or orange, according to the species present; but some bubble-like appearances will also be seen in the gelatine. These are the colonies of the bacilli of tetanus.

It is very difficult to get a pure culture, as the other genera cling very persistently to the tetanus, but it can be done. Kitasato* obtained it by innoculating a rat at the root of its tail with the mixed culture, and after its death from tetanus a culture was made from the wound. By repeating this process, from tube to animal, and from animal to tube, a pure culture can at last be gotten. When isolated, it is seen to be a slender rod, bearing a spore on one end which gives it somewhat the appearance of a minute pin.

Now, in the course of the lives of these micro-organisms, there is produced a substance that presents many analogies to the alkaloids, and which, following the nomenclature used for the alkaloids, has been called *tetanine*. Since tetanine was isolated, Brieger† has obtained three other toxic materials from these cultures, and has described, with great fullness, their physiological action. I condense his account of the four substances. The first, *tetanine*, in a dose of a few

* *Zeitschrift für Hygiene*, Bd. VII, p. 225.

† Zur Kenntniss der Ätiologie des Wundstarrkrampfes nebst Bemerkungen über das Cholera roth. *Deutsch Med. Wochenschrift*, 1887, p. 303.

milligrams, produced in mice the characteristic symptoms of tetanus; the second, *tetatoxine*, produced tremors at first, and later convulsions and paralysis; the third, which was *not named*, produced well-marked tetanic symptoms, and also excited the salivary and lachrymal glands to increased activity; and the fourth, *spasmotoxine*, produced tonic and clonic spasms, which at once prostrated the animal. It is thus seen that the symptoms of tetanus may all be explained by the physiological action of these ptomaines.

The reader has doubtless noticed that nothing has been said about "idiopathic" tetanus, nor infantile tetanus. The reason for this is that although, in deference to the standard writers, the older classification is nominally and clinically observed, pathological writers of to-day are inclined to regard all tetanus as traumatic. The size and nature of the wound is of no consequence—the scratch of a pin, the prick of a needle, being enough to furnish a nidus for the growth of the specific agent; and to claim that so trifling a wound could not be the starting point of the disease is like claiming that strychnia poisoning could not be produced by hypodermic injection because of the minute size of the puncture. The wound is only the avenue through which the poison gains access to the body; and since the micro-organisms generate the poison, a microscopic wound would be sufficient for infection to take place. As every one constantly receives minute injuries, and pays no attention to them, the absence of a history of a wound is not conclusive proof that none has been received. In the case of infants, the umbilical wound is the usual point of infection.

We may now sum up the results of the investigations made in regard to tetanus somewhat in the form of a syllogism; and if so arranged, it falls into the following form:

1. Tetanus consists essentially of a tonic spasm of certain muscles or groups of muscles, which have been thrown into the state of physiological tetanus.

2. This is caused by an abnormal irritability of the reflex centres in the medulla and cord.

3. This hyperæsthesia is the result of the physiological

action of certain ptomaines, or alkaloids of decomposition, formed in a wound and absorbed therefrom.

4. These ptomaines are the result of the growth of a specific bacterium called the bacillus of tetanus or the bacillus of Nicolaier, and only by it. Therefore,

5. Tetanus is a toxic disease, caused by the infection of a wound by this specific bacterium, or its products.

Let us, finally, consider *the treatment*. In this disease, almost above all others, is the cheap ounce of prevention preferable to the more costly and difficult pound of cure. As soon as the patient comes under observation, the wound must be thoroughly explored and cleaned. All foreign substances, especially bits of wood, street dust, straw, hay, pieces of clothing, and the like, must be removed with scrupulous care, and the innermost recesses of the wound opened and exposed to the action of a germicide. Iodoform or aristol should be freely used, not for their germicidal action, which is small if existent at all, but for their undoubted power, of decomposing ptomaines, perhaps through the iodine they contain. Corrosive sublimate and carbolic acid remain our chief aids in rendering the wound surgically clean, and should be used first, the iodoform or aristol being used after disinfection.

I wish to emphasize in every way, that every instrument, ligature, bit of sponge or cotton—everything, in fact, that touches the wound, should be thoroughly disinfected. With scrupulous care that the wound is aseptic, and, as an additional precaution, with the use of antiseptics, tetanus will not occur; and if it does, it is a sure indication that the wound has been contaminated by some error of omission or commission on the part of the surgeon. There is a prevalent idea that wounds of the hands and feet are peculiarly liable to be followed by tetanus, but this is only due to the fact that the feet and hands are particularly liable to become dirty, and are more difficult to cleanse.

Should the attack commence, the first indication is to stop the formation of the ptomaine. With this in view, the wound should be opened and disinfected, sometimes with

the actual cautery. The writer thinks that strong (1:250 or 1:500) solutions of corrosive sublimate will do as well, and these last have the advantage of avoiding the shock incident to the use of the curette or cautery. The room should be absolutely quiet, to avoid peripheral irritation as much as possible. The bed-clothes should be light, and, if practicable, supported on a frame above the patient so as not to touch him. Potassium bromide or chloral is to be given in large doses by mouth or rectum, either together or separately. Chloroform and ether have but doubtful value, for to produce any effect they must be given to full anæsthesia; and as the patient has difficulty in breathing any way, it is unwise to throw a further obstacle before him. Amyl nitrite is recommended, but the writer has had no personal experience with it. Curara seems to be indicated, and some writers claim good results from its use. It is worthy of more extended trial in this and similar diseases. Opium in large doses will frequently be of service, and digitalis, ammonia or alcohol may be needed as stimulants.

Physostigma, however, is our chief reliance among drugs. A third of a grain of the extract subcutaneously, or a grain by the stomach, is enough to commence with, and the dose should be repeated in two hours. It is far more elegant to use than salicylate of physostigmine subcutaneously, and it has the additional advantage of avoiding the pain and spasm that attends an attempt to swallow. Although comparatively few cases have as yet been reported, the success of this treatment is very gratifying.

Dr. R. Schwartz,* of Padua, announces the successful use of the "tetanus antitoxine," discovered by Tizzoni and Caltani, for the prevention and cure of tetanus. By using this product hypodermically, immunity against the disease was produced, even in animals susceptible in a high degree; and it was shown that the blood serum of these immune animals exerts an antitoxic action, and is capable of producing immunity against, and cure of the disease. Tetanus

* *New York Medical Record*, Vol. XLI, p. 126.

antitoxine may be produced in a solid shape by adding alcohol to the serum of an inoculated animal, and evaporating *in vacuo*. As the disease in man is of longer duration than in many animals, it is to be hoped that the timely use of this agent may be of use. Schwartz relates the case of a boy of fifteen years of age treated by him, and says that Gagliardi, of Molinella, treated a severe case by hypodermic injection of one gramme with disappearance of all symptoms and complete recovery. It is hoped that further use may confirm these brilliant results.

ART. III.—Unsuccessful Operations for the Cure of Hydrocele.

By W. M. L. COPLIN, M. D., of Philadelphia, Pa.,

ADJUNCT PROFESSOR OF HYGIENE AND DEMONSTRATOR OF PATHOLOGY, JEFFERSON MEDICAL COLLEGE; ADJUNCT PROFESSOR OF PATHOLOGY, PHILADELPHIA POLYCLINIC; A. A. SURGEON, MARINE HOSPITAL SERVICE; PATHOLOGIST TO ST. AGNES' HOSPITAL, ETC., ETC.

Few surgeons have not experienced considerable difficulty at times in obtaining satisfactory cures in cases of hydrocele. There may be some to whom this statement will seem rather odd; but to those whose experience has been reasonably large, I think it will not appear as a revelation. For several years I have been impressed with the fact that occasionally, without any reason which to me was apparent, cases did badly and the treatment promised but little. For a period extending over three or four years, I have been making observations upon a few cases of my own and upon some treated by others, and have formed conclusions which I now desire to put on record. Many of these conclusions are not new; in fact, none of them are, except that I am not aware that some of them have been put in the dress which is here proposed.

Until within the last few years, the treatment of hydrocele has been by tapping and drawing off the fluid, following this by the injection of some irritant—iodine, carbolic acid, etc. This has not been found universally successful;

indeed, there has been considerable dissatisfaction with tapping and injection as routine treatment. Why? Of course, the action of the operation is dependent largely upon the fact that it induces an inflammation of the serous lining of the sack, which causes adhesion of the two layers, and thus obliterates the space in which the accumulation of serum takes place. Where the sack is old and fibroid, collapse after tapping is not satisfactory; the walls of the sack are sufficiently thick and rigid to prevent a close adaptation of the sides following the withdrawal of the fluid. This is especially true where there has been enough fluid present for a prolonged period, or where tapping has been practiced once or twice and calcareous plates have been deposited in the wall. These I have not infrequently observed in cases where tapping and injection have not proven successful, and where the subsequent excision of the sack was found necessary.

Now, the question arises, What shall be done with this class of cases? No doubt excision of the sack affords the most satisfactory results, or, where the plates be deposited over the testicular portion of the tunic, the open treatment, by laying the sack freely open and packing will afford satisfactory results.

The most frequent cause of non-cure is deficient drainage. The fluid in the hydrocele sack is not of a very high specific gravity, but it would seem the irritation leads to the development of a ferment, which occasionally induces coagulation of the serous contents; and where this has once taken place, collapse of the sack is not possible; this coagulable material never becomes vascularized, and hence can never organize. Under such circumstances, the sack will be found filled with this albuminoid material, which is clear, looking not unlike calf's foot jelly, and is evidently made up of a fibrillated stroma, in the meshes of which is entangled the albuminous product coagulated.

My first experience in a case of this kind was in the Clinic of the Jefferson Medical College, where Prof. Keen

had operated on a case and removed this material, which I attempted to carry to my laboratory. I put it in my pocket, and used all possible care; but found, when I reached my destination, there was nothing left but a little semi-solid material about one-twentieth of its former bulk. I have on two or three occasions seen just such masses, and I am convinced that it is nothing more nor less than the blood serum—liquor sanguinis, which has undergone spontaneous coagulation.

The material, once formed, necessitates removal, or we cannot hope that anything like recovery will take place. I believe that it is caused largely by faulty or non-drainage; that when the irritant is thrown into the cavity, if the serum which exudes could be drawn off, coagulation could not be possible.

Dr. W. Joseph Hearn has hit upon the best operation to secure this end. He cuts down upon the sack, and, catching it, makes a hole sufficiently large to permit the introduction of a small mop of cotton; after the serum is drawn out, he *dries* the cavity by means of sterile cotton, and then swabs it out with deliquescent carbolic acid; a small piece of bichloride gauze is introduced in the opening in the sack in order to facilitate drainage, and an antiseptic dressing is applied. At the end of twenty-four hours, the capillary drain is removed, and the case goes on to an uninterrupted recovery. The drainage prevents the accumulation of the inflammatory products; and its subsequent solidification permits of and favors complete collapse of the sack, diminishes the infiltration of the scrotal connective tissues by favoring the removal of infiltrated serum, which must of necessity develop during the first twenty-four to thirty-six hours through the drainage path. This operation, in Dr. Hearn's hands, has proven successful, and is, I believe, from a scientific standpoint, the most valuable operation which we possess. An essential feature, of course, is thorough and efficient antiseptis.

Other conditions which occasionally prevent cure are the

development of a purulent inflammation of the sack, hæmorrhagic extravasation into the sack—either of these two precluding the possibility of occlusion; they are, however, sufficiently rare to hardly require consideration. Purulent inflammation should never occur where antiseptics has been carried out, and hæmorrhagic extravasation is nearly always due to injury to the testicle in tapping; they are, therefore, both due to either accident or criminal carelessness.

ART. IV.—Intestinal Septic Infection in Typhoid Fever, and its Treatment by Means of Iodoform, Creosote, and Sulphide of Calcium.

By **BEDFORD BROWN, M. D., of Alexandria, Va.,**

EX-PRESIDENT AND HONORARY FELLOW OF MEDICAL SOCIETY OF VIRGINIA, ETC.

For the past five years, I have, when the opportunity offered, been engaged in the study and observation of septic infection in typhoid fever from intestinal sources, and of its correction, principally by means of iodoform, creosote, and sulphide of calcium. In all cases of typhoid fever, coming under my charge during this period, I have instituted a series of experiments with a view of testing these various antiseptics and disinfectants in intestinal sepsis.

I was led to institute these experiments because of the rational conclusion which I have reached, that the contents of the intestinal canal, containing matter undergoing constant putrefaction and fermentation, and generating septic infectious materials—possibly and doubtless in the form of bacteria, ptomaines, and alkaloids—during weeks and months, while passing over an extensive ulcerated surface, in and around Peyer's glands, is afforded every opportunity for absorption into the general circulation through the open mouths of ulcerated blood vessels and lymphatics. The digestive process, in its healthy state, is an act not only designed to prepare nutriment for the system, but, more than that, it is an absolutely antiseptic process. If it were not, human life would be in constant jeopardy from the putre-

faction and sepsis of all ingesta taken into the stomach. Now, this is what does really in large part occur during the protracted course of typhoid fever. The great vital functions of digestion, assimilation, and nutrition are, in large part, suspended for the time being, and consequently the contents of the alimentary canal undergo putrefaction. It is altogether probable that two-thirds of the ingesta taken into the stomach during the progress of typhoid, pass through the alimentary canal in an undigested state, and, therefore, undergo putrefaction and decomposition, and are constantly affording septic material for absorption.

But this is not all. The field of ulceration is a vast surface for the generation of bacterial life. But whatever theories may be entertained in regard to these questions, it is a fact, well established, that the intestinal canal, its secretions, excretions, and faecal contents, are a source of constant septic infection, which menaces the life of the body every hour during the progress of typhoid fever. The question arises, if it be a fact that there is septic infection from intestinal sources, and that this septic material exerts an important influence over the type, progress and termination of typhoid fever, whether we have in our possession any adequate means to neutralize this intestinal sepsis, and that has the power of preventing septicæmia?

In answer to this question, I would say, that the experiments made by myself, in the past five years, upon some twenty cases of typhoid, convince me that we possess, in iodoform, creosote and sulphide of calcium, efficient antidotes to the intestinal sepsis of typhoid fever. I have experimented with other antiseptics, as naphthaline, but they are far inferior to the former. Indeed, I am free to say, that, in the three antiseptics mentioned, are to be found the best agents for this purpose. When given in capsule or pill form, they do not in the least offend the palate or stomach. On the contrary, I believe that, in the grave forms of the disease, when the digestion and assimilation are almost in a state of suspension, they will promote those processes.

A large number of therapeutic agents have been used in times past, for the purpose of promoting healing of this intestinal ulceration. Whatever good effects there may have been effected was accomplished through their antiseptic powers. This was the case with Mitchell's nitrate of silver and Wood's turpentine treatment, forty years ago. These agents possessed limited antiseptic powers. This is also true of the iodine and carbolic acid treatment, which is so apt to impair digestion. I find that the iodoform and creosote treatment exerts a very marked influence over the intestinal excretions and the character of the fæcal discharges. These discharges, from the beginning, assume a most healthy character. They become more consistent in form, more bilious in character, and gradually lose their putrescent and offensive odor. Evidently the processes of fermentation and putrefaction in progress in the alimentary canal in this grave septic disease are arrested by these agents, and the products of these processes of fermentation and putrefaction are also arrested, as, for instance, the generation of gases and tympanitis. I am induced to believe that the antiseptic influence of these agents do not stop at the intestinal canal, but go on in the great channels of the system.

We know the wonderful influence of an antiseptic character exerted by sulphide of calcium over pyæmic processes and suppurative action when given internally. It will, through its sulphur element, penetrate to the remotest points, and search out the most distant recesses where pus formation is going on.

In an interesting case of hip-joint disease, in a lovely child, where the head of the thigh bone had been dislocated before I saw it, and there was enormous swelling about the joint, intense pain and constant fever, with all the prospects of a large abscess, one grain of bi-sulphide, every three hours, seemed, from the beginning, to direct itself to that point, and by its powerful antiseptic action, to absolutely arrest the suppurative tendency, subdue the inflammation and swelling, and to restore the general health.

Now, if an antiseptic agent can accomplish such remarkable results, is it astonishing that it could play the rôle in typhoid fever of a positive antiseptic, not only in the intestinal canal, but in the system at large?

In the adynamic forms of typhoid fever, with putrescent conditions of the intestinal canal, and great reduction of vital action, I now always give this drug in pill form in connection with creosote and iodoform. The article is given in pill form, as prepared now so nice in one-grain doses, every third hour.

The iodoform and creosote are given according to the following formula:

R_x Iodoform..... 5ss
 Creosote..... 5ss

M. Capsule No. xxx. Sig. One capsule every three hours.

If diarrhœa is present to an excessive extent, a small quantity of opium is combined in the capsule. If hæmorrhage is present, then I find the following combination the most efficient of all others for arresting it.

R_x Iodoform..... ʒj
 Creosote..... gtt. xx
 Tannin..... ʒij
 Opii pulv..... grs. v
 Ergotine..... ʒiiss

M. Capsules No. xx. Sig.—One capsule every hour or two hours, according to the extent of hæmorrhage.

I am convinced that the antiseptic action of these agents exerts very much the same influence on bacterial formation and life in the intestinal ulceration and over the septic changes in the putrefactive and fermentative processes in the intestinal canal that they do on a wounded surface. This is specially true of iodoform. Iodoform in its passage through the intestinal canal, probably does not undergo any material change or modification throughout its travels. We know that in its application to wounds and in its exposure to the atmosphere that it does not. Hence, there can be no doubt but that it is one of the few antiseptics that remains intact when taken into the stomach, and passes on through the alimentary tract, through the stomach, duode-

num, the jejunum and ileum, to the ulcerated point, and there is disseminated over that surface as when applied to an open wound. Indeed, this vast ulcerated surface over Peyer's glands and the neighboring intestinal mucous membrane, should be considered in the light of an unhealthy open wound, in which the generation of bacterial life is exceedingly active, and in which sepsis is going on with wonderful rapidity, infecting the entire contents of the intestinal canal, and when absorbed into the general system, producing a dangerous form of septicæmia, or septic fever. Now iodoform here plays the identical rôle that it does in a septic wound on the surface of the body, and if it acts well in the one case it does in the other.

In the treatment of typhoid fever, I do not by any means profess that I confine myself to intestinal disinfection alone. While I believe that intestinal disinfection is a matter of vital importance, and goes a great distance in the process of restoration, preserving the patient from dangerous blood-poisoning, it is barely possible that we do not yet possess an absolutely perfect disinfectant of typhoid fever.

But pyrexia deserves our attention also. It is true that I find that when disinfection of the intestinal canal is practised, it does in a most marked degree modify the type of fever, and thereby save the necessity of depending alone on antipyretics. Indeed, intestinal antisepsis is not only designed to exert a local but also a general influence in the great process of general disinfection. The grade and type of fever constitute a very excellent measure of the study, operation and extent of sepsis, local and general, in typhoid. If our antiseptics are doing their duty, and if our disinfecting processes are operating favorably, we can gauge them by their influence on the type, progress and character of the fever.

I believe that the fever of typhoid will correspond in degree accurately with the extent of intestinal ulceration and sepsis. If this proposition be true, then we should look with never-failing vigilance to this important question of intestinal disinfection.

As antipyretics in typhoid fever, I employ the sulphate of quinine and antifebrine combined in capsule, two grains of each every third hour. As the discussion of this paper is limited to the subject of intestinal sepsis in typhoid fever and its treatment, I would not regard it as proper to bring in any other therapeutic questions for consideration.

In conclusion, while I am willing to admit the crudeness in style, and the haste with which the materials have been combined in the preparation of this paper, my desire in its preparation was to present to the profession my personal experience in the practice of intestinal disinfection, the means used for that purpose, and the results. In relation to the results, I can conscientiously say that where it has been systematically and methodically practiced, the results have all been favorable.

ART. V.—Mechanical Treatment of a Case of Torticollis with Sayre's Jury Mast

By STUART MCGUIRE, M. D., of Richmond, Va.

Last spring a boy, seven years of age, was brought to my father, Dr. Hunter McGuire, for treatment. He had muscular torticollis, or wry neck, which had existed since his birth. The left sterno-cleido-mastoid muscle was firmly contracted, its sternal origin being particularly hard and prominent, and offered decided resistance to movements of the head in the opposite direction. The trapezius and scaleni muscles of the same side were also somewhat involved. The deformity was quite marked, the left ear being drawn down towards the corresponding shoulder, and the head rotated towards the right.

An operation was decided upon, and the child being anæsthetized, the sternal origin of the sterno-cleido-mastoid muscle was divided subcutaneously. This gave at once such increased freedom of motion that it was deemed unnecessary to cut the other tendons, and the case was turned over to me for mechanical treatment.

I first applied an apparatus described by Dr. Alfred C. Post, in the *Transactions of the American Medical Association* for 1880. It consisted of a closely fitting cap formed of steel bands, which was secured on the head by a strap passing under the chin. There was a hook on the cap just behind the right ear, and another hook just over the sternum on a plaster-Paris jacket, which enveloped the patient's trunk. Extending between these two hooks was an artificial muscle of rubber, which could be tightened or loosened at pleasure. The band of rubber was thus applied as nearly as possible in the direction of the right sterno-cleido-mastoid muscle, and it was hoped that the power of that muscle, augmented by the tension of the rubber band, would be sufficient to overcome the contraction of the undivided muscles of the opposite side.

The patient's head was so round, however, that it was found impossible to keep the cap from turning, and after two or three days' trial it had to be abandoned.

An ingenious invention of Mr. J. O. Nelson, an instrument maker of this city, was then tried, but it also proved ineffectual.

It then occurred to me that perhaps a Sayre's Jury Mast,



properly adjusted, would hold the head in the desired position. As soon as the apparatus could be obtained, I

applied it in the usual way, but bent the back rod so as to throw the cross piece, from which the head stall swung, a good deal to the right of the middle line. By this means the point from which traction would be made was brought in the line of the desired position of the head.

The accompanying cut shows how well the device accomplished its purpose.

The head was firmly and steadily drawn to the right, and a constant strain put on the contracted and divided muscles, with little or no discomfort to the patient.

During the time the other apparatus were being tried, the divided muscles had partly re-united, and the head almost returned to its original position; but the steady pull of the jury mast soon made them yield, and the ultimate result was very satisfactory.

ART. VI.—Colonic Irrigation and Feeding Per Rectum—How Best Attained.*

By EDWIN RICKETTS, M. D., of Cincinnati, Ohio.

The lower portion of the alimentary canal, which, for convenience sake, has been named the large intestine, made up of the rectum, sigmoid flexure, descending, transverse, and ascending colon—in all a little more than five feet in length—has been considered not prudent to penetrate by a tube of great length; so that what good we were to get from absorption of food from enemas must have come from rectal absorption alone.

No one has doubted but that in those cases suffering from cancer of the stomach, stenosis, gastritis, or where the stomach fails to do its work following abdominal section, but that the rectal alimentation alone was very desirable. With colonic feeding we can have better and prompter results. In subjects knowing that an abdominal section is to be done on them in a day or so, we can have a pre-operative

* Read before the Medical Society of Virginia September 15th, 1892, during its Twenty-Third Annual Session at Alleghany Springs, Va.

shock. Physic these patients as much as it is possible with salines for a day or so previous to an operation, and yet, in some cases in the first three or four days of the post-operative stage, when an attempt is made to clear out the bowels with salines, I have been many times surprised to find what an amount of fæces would be found in the large intestine. In some of these cases, I find, after the pre-operative physicing by salines, that it is best to wash out the colon by means of this tube. Especially is this true in those cases demanding an abdominal section, when opiates have been administered for any length of time. In one case of appendicitis that I thought I had thoroughly purged previous to the section, I washed out oysters four days after, from the large intestine with the tube. The patient ate the oysters one day previous to the attack—two days previous to the section. Morphia had been administered freely to control pain.

In the old mode of trusting to absorption by the rectum alone, irrigation, previous to the use of the old rectal tube, was not often enough resorted to. The inability of the patient to retain the nourishing enemata for any great length of time was a serious objection, and many times, in those cases suffering from an irritable rectum, but little, if any, good was accomplished per rectal enemata. No one dared to use the tube longer than ten or twelve inches for fear of doing damage, and most frequently the nutrient fluid was deposited within the rectum in the same manner as if we were going to use an enema to move the bowels. One of the first cases in the beginning of my general practice was a lady suffering from gastric ulcer. All remedies by the mouth failing to do any good, I resolved to take away from her all medicine and all food by the mouth for a period of six weeks. Even in this old imperfect way of rectal nourishment, I was enabled to sustain her for the six weeks, and her restoration to health was satisfactory. The greatest difficulty I had to overcome in her case was the tendency to an irritable rectum. In this case, the ordinary Davidson

✓ syringe with the short rectal tube was used. Even then, fifteen years ago, I wondered if it were not possible to carry this food farther into the colon; feeling that if I could accomplish the same, we would not have the tendency toward the irritable rectum to deal with.

Having been taught that it was not judicious, if not impossible, to introduce a tube of any great length into the colon, I did not have the courage of my convictions to push any experimentation in this line. It is not my intention to take up the anatomy and the physiology of the large intestine; it is familiar to you all. The physiologists claim that all the benefits to be derived from rectal or intestinal feeding is to come by simple absorption.

Kirke, in his last edition of *Physiology*, says: "The changes which take place in the chyme in the large intestine are probably only the continuation of the same changes that occur in the course of the food's passage through the upper part of the intestinal canal. From the absence of villi, however, we may conclude that absorption, especially of fatty matter, is, in great part, completed in the small intestine; while, from the still half-liquid pultaceous consistence of the chyme when it first enters the cæcum, there can be no doubt that the absorption of liquid is not, by any means, concluded. The peculiar odor, moreover, which is acquired, after a short time, by the contents of the large bowel, would seem to indicate a further chemical change in the alimentary matters, or in the digestive fluids, or in both. The acid re-action, which had disappeared in the small intestine, again becomes very manifest in the cæcum, probably from acid fermentation-process in some of the materials of the food.

"There seems no reason to conclude that any special 'secondary digestive' process occurs in the cæcum or in any other part of the large intestine. Probably any constituent of the food which has escaped digestion and absorption in the small bowel may be digested in the large intestine; and the power of this part of the intestinal canal to digest fatty, albuminous, or other matter, may be gathered from the good effects of nutrient enemata, so frequently given when, from any cause, there is difficulty in introducing food into the stomach. In ordinary healthy digestion, however, the changes which ensue in the chyme, after its passage into

the large intestine, are mainly the absorption of the more liquid parts, the chief function of the large intestine being to act as a reservoir for the residue of digestion before their expulsion from the body."

We know that the bowels move as the result of pressure brought to bear upon the nerves supplying the rectum by the fæces. This explains why simple rectal enemata are so illy borne; and after being used a number of times, the rectum may become so irritated that it is unable to retain the enema for the desired length of time. It impressed me that if we were to carry the nourishing enema, if possible, up to the ileo-cæcal valve, depositing the same in the large intestine, from the valve to the rectum, we would have more absorption of food minus the pressure upon the rectum, thus avoiding the tendency of the rectum to empty itself of the contents and that of the large intestine. It was not until my friend, Dr. F. W. Langdon, of Cincinnati, Ohio, Professor of Anatomy in the Miami Medical College, had this manufactured for his use in the relief of obstruction of the colon, and also for irrigation of the same, that I ventured to suggest colonic feeding by means of this tube. A number of cases of obstruction, irrigation and feeding have been treated by means of this tube in our private hospital. There has been no doubt as to the ability to carry this tube into the large intestine its full length. In one case of my abdominal work, several months after section for the removal of pus tubes, obstruction of the bowels came on. This patient had stercoraceous vomiting, but the rectal tube was introduced, and olive oil thrown into the colon every three or four hours for four days, each time getting a little farther into the large intestine. The obstruction was removed by this means. In many cases following obstruction, in which flatus becomes very annoying, the introduction of this tube into the intestine through which is pumped the turpentine, the enema soon disappears. One case of appendicitis that I operated upon last February for an indiscretion of diet, had a severe attack of flatulency. The patient, a medical student, thought he had peritonitis. This tube

was introduced into the intestine four feet, through which a turpentine enema was forced, and in less than thirty minutes all flatulency had disappeared, and the patient was relieved of his intense suffering.

Now, as to the tube that I have here presented for your inspection. It is made of pure soft rubber—one-half inch tube, with a one-eighth inch opening direct, and is five feet in length. Notice especially that the wall is much thicker than the ordinary rectal tube. These thick rubber walls allow you to bend it on itself much more than the old thin walled tube can be, without kinking. This is a decided advantage, as is the direct opening in the end of the tube over the side-openings in the old style tube. By the direct opening any faecal mass with which the tube comes in contact will allow the stream of fluid to be thrown directly upon the same. This cannot be accomplished in a tube that has the side-openings. You can readily understand the advantage of this tube with the direct opening.

Now, as to the use of the tube for irrigating the colon, and for colonic feeding. Put the patient in the knee-chest position, carrying the well-anointed outer end of the tube with one of the index fingers into the rectum, and into the sigmoid flexure. The inner end of the tube should be slipped over the rectal tip, which is adjusted to the Davidson syringe. You can use warm soap-suds, cotton-seed or olive oil. Whatever ingredient is used should be at a temperature of 70 or 75 degrees. The tube should be filled with the fluid previous to the introduction of the same. Some difficulty is experienced in the first few times with its introduction into the sigmoid flexure, but a little care, patience, and perseverance, will overcome the trouble. Forcing gently the tube along into the large intestine, occasionally pumping a little fluid ahead of it, will locally distend that portion of the bowel coming in contact with the end of the tube. By this occasional pumping with the syringe, and an occasional forcing of the tube from behind, it is allowed to pass farther into the intestine. If, in spite of the

patient's efforts, the bowels must be emptied, allow them to do so, re-introducing the tube. By this means, it will not be long until the colon is thoroughly washed out. By a few repeated efforts, the tube can be passed its entire length when you are ready to introduce the nourishing enema of whatever you may select. I find that eight or ten ounces of the nourishing enema can be forced in, a syringeful at a time, after which the tube is withdrawn a few inches, when another syringeful is thrown into the intestine. A few procedures of this kind, and you have deposited the desired amount between the ileo-cæcal valve and the rectum. Once or twice a day is often enough to administer the enema in this way. When colonic irritation is present as the result of the nourishing enema, it can be washed out with warm water, after which the colonic feeding can be resumed.

137 *Broadway.*

ART. VII.—Some Remarks on the Continued Administration of Digitalis, Illustrated by the Report of a Case.*

By F. M. BROOKS, M. D., of Fairfax Station, Va.

The results of the continued use of the drug that I am to state to-day, and the arguments favorable to such use, may well be preceded by an allusion to the physiological action of digitalis. This may be divided into its action on the nervous system, and, indirectly, through it, upon the muscular system; and into the action on the heart and circulation, which action is the very much more important of the two.

The action of digitalis on the nervous system is that of a stimulant of the vaso-motor centres, and especially so of the great pneumogastric nerve, in small doses, and a paralyzant of the same in very large poisonous doses; on the heart, the action is such as to cause, in small doses, slowing of the heart, while very large and continued doses cause

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arrest of the heart's action in systole. Blood poison is increased, due to greater or less contraction of the capillary arterial system.

The chief use of the drug, as you all know, is in valvular disease of the heart, and conditions consequent upon this trouble. But the amount given and the length of time continued, must depend upon the results gained, and upon the judgment and knowledge of the physician.

To show to what extent its use may be carried, and the results possibly to be obtained in cases of valvular disease uncomplicated, save by the dropsical effusion, I propose to give the Society a case that I have had under treatment since November, 1889:

The patient, an Army officer, and, at the time, Recruiting Officer at Washington, D. C., first called on me in November, 1889. He stated that in his duties he was compelled to climb, whenever he went to his office, a flight of 40 steps, and that, after having been stationed in Washington a short time, on going up these stairs, he was out of breath, and after a time, found he was compelled to stop and rest when half way up the stairs. He applied to the Army Surgeon stationed there, who called in a consultant, and they diagnosed mitral insufficiency, with no other organic complication. They placed him on tonic treatment, strychnia, etc., and sent him home on sick leave. He continued this treatment for a time, with but small relief. In addition to the above, he was given elaterium for the dropsical effusion that had by this time become very considerable. At last, becoming discouraged by the failure of the treatment received, and on account of the statement of his physicians, that in all probability he would not live longer than spring, he called me to attend him.

On examination, I found that the diagnosis of uncomplicated mitral insufficiency was correct, and that his case was one of plain valvular insufficiency, with the usual complication of severe dropsical effusion. The swelling of legs and thighs extended to his body, and his abdomen was so much swollen as to cause much distress when he was in the recumbent position; his appetite was very much impaired; he could not sleep, and, in fact, was exceedingly "blue." His heart was quite feeble, with a drop of about two pulsations in each seven, when felt at the wrist; his

secretion of urine was very small, due, no doubt, to the pressure of the dropsical effusion on the renal vessels.

After careful consideration of his case, I told him that his was an exceedingly serious one, and that there were more chances against his getting better than in favor of it. In fact, that he had but *one* chance of any substantial improvement, and that through the production of compensatory hypertrophy, the production of which condition depended almost entirely upon the *long* continued exhibition of one drug—viz., digitalis. Of course, other drugs were used for the relief of symptoms, and I will mention here that, elaterium having failed, to any extent, to relieve the ascites, continued full doses of sulphate of magnesium produced the desired result, without the pain, and with much less prostration than did the elaterium. I will also mention that, on the *few* occasions where the salts did not produce large watery evacuations, the exhibition of repeated small doses of blue mass, say two grains every three hours till three or four doses were taken, followed by the salts, gave the desired result. It seemed, in some way, to soften or liquify the effusion, so that it would pass off freely by the bowel and kidney. Jaborandi was also used, but with no appreciable benefit—in fact, I pushed it till it affected the heart decidedly without the least increase of the perspiration. In addition to the above, absolute rest was required of the patient.

Now, having given you the symptomatic and side treatment, I will return to the main issue, the digitalis.

At my first visit, having made my diagnosis, I put the patient on tincture of digitalis, 15 drops every four hours, from early in the morning till bed-time each night; kept this up for about ten days with some benefit, but improvement not satisfactory; increased digitalis to 20 drops; continued ten days longer; improvement not satisfactory; increased to 25 drops, and continued as before, and so on increasing the dose 5 drops every ten days till he was taking 35 drops at a dose. While he was taking this quantity, suddenly his kidneys began acting, and he passed two large chambers full of urine each day and night, till the effusion was all out of him.

At this time, he was taking sulphate of magnesium two days in each week, 5ss every four hours. I kept up the digitalis constantly for a few weeks, and then began to give it to him intermittingly; that is, steadily along for ten

days, then stop four days, and go on again, gradually increasing the rest interval till I could determine how long the cumulative action of the drug lasted, and found that to be from ten to fourteen days. In the early part of the treatment, the patient complained bitterly of the taste of the drug, that it was always present—in fact, the only taste he had—but now he does not complain of it.

During the nearly three years that I have treated him, he has had several relapses, when the dropsical effusion would return to almost the extent of the first attack; but each time it has been directly traceable to his discontinuing the digitalis longer than I ordered him to do. So far, I have been able to reduce the dropsy each time by the treatment just described. His heart has actually improved, so that a drop in the radial pulse is not present, as a frequent occurrence during the sixty seconds that I count it. His general condition is fairly good; he is regaining his flesh, eats well, sleeps enough, and is in every respect greatly improved.

He still takes thirty-five drops of tincture of digitalis three times a day, continued for one or two weeks, with a rest interval of two weeks.

In the course of the treatment, I gave him, at different times, tonics to improve his appetite, etc., such as quinine, mineral acids, iron, gentian, Fellows' hypophosphites compound, etc., but with no increase of same. Last winter, a friend of his sent him a bottle of Santum wine made at Haymarket, Va., and that, strange to say, gave him an appetite that he has so far not lost.

In conclusion, I wish especially to ask your attention to the two unusual points in the paper, viz: (1) the long continued use of the drug, without a rest, in the early part of the treatment; and (2) the large dose given.

I do not think that digitalis is a specially dangerous medicine, and am of the opinion that it may be safely pushed continuously till the pulse rate drops to 45 in the minute. I think digitalis one of the best *slow* heart tonics, and am much in the habit of giving it in such conditions as typhoid fever, phthisis, the later stages of pneumonia, etc., in conjunction with alcohol in some form. My experience has led me to believe that, as a rule, physicians fail to comprehend that digitalis must be given steadily and in

increasing doses, till the object desired is gained or the drug found unsuited to the case. I think it, with one other drug—quinine—the only absolutely safe antipyretic for use in the acute fevers of children.

Clinical Reports.

Case of Idiosyncrasy as to Effect of Ipecac.

By G. D. MAXSON, M. D., of Hartford, Kan.

I was greatly interested in the report of cases of idiosyncrasy from ipecac in the July number, 1892, of the *Virginia Medical Monthly* by Dr. E. L. Morgan, of Washington, D. C. The effect produced by ipecac in my own person is so similar to the cases reported in that paper that its history will be little else than a repetition of them.

My age is 65 years; occupation for the past forty years, physician; health and constitution good. The first time that I became aware of any particular susceptibility to the drug, ipecacuanha, was at the age of 20 years, soon after I had commenced the study of medicine. I was directed by my preceptor to make a quantity of Dover's powder. As soon as I began to handle the ipecac to combine with the other ingredients, I was seized with paroxysms of sneezing and a sense of impending suffocation, profuse watery discharge from the eyes and nose—in a word, had a severe attack of asthma of several hours duration, followed by a cough and profuse expectoration, lasting several days. All subsequent attempts to acquire a tolerance of the drug were futile, the least exposure producing similar results, proportioned only in intensity by the amount inhaled or taken.

Some two years after this, having an attack of diarrhœa, my preceptor, not thinking at the time of my idiosyncrasy, gave me a full dose of Dover's powder. As soon as I swallowed it I recognized the presence of my old enemy, which came this time with redoubled fury, and I saw that the struggle between us must be for life or death. There was a most distressing sensation of burning and oppression in the throat and stomach, with great dyspnœa and convulsive efforts to vomit. This condition continued with increasing

violence, and spasms of the diaphragm and muscles of the abdomen, about six hours, when a profuse hæmorrhage—probably from rupture of a blood vessel in the lungs—soon caused complete syncope, lasting more than an hour. When consciousness was restored, all the violent symptoms had disappeared, leaving me in extreme exhaustion from loss of blood.

At one time, some ten years subsequent to the above noted incident, on entering a drug store and stepping up to the counter to speak to the clerk, who was at the time transferring the contents of a package from the papers to a jar, I did not need to ask what the contents were, for I immediately felt the full force of its attack. Gasping for breath, I rushed to the open air, and for hours suffered the most intense agony that the demon, ipecac, could inflict. There was a feeling of great oppression at the præcordia, suffocation, extreme nausea, convulsive efforts to vomit, spasm of the diaphragm and muscles of the abdomen, sneezing, a profuse watery discharge from the eyes and nose, a rash similar to urticaria, with intense itching and burning over the entire body, but most intense on face and neck; swollen and congested mucous membrane of mouth, nose and conjunctiva, and puffiness of the tissues about the eyes, completely closing them from sight. After several hours these violent symptoms began gradually to subside, and, as usual, terminated in bronchitis, with much cough and expectoration, lasting several days.

In the above I have spoken of but few instances in which the effect of ipecac was felt: but as my occupation for more than forty years has been physician and druggist, it will be readily seen that my exposures, notwithstanding the greatest care, have been frequent and the resultant effects experienced many.

My taste is so sensitive that by placing a few drops of any cough mixture or other compound on my tongue, I can state with certainty whether it contains a particle of ipecac or not, even before an analytical chemist could get ready to make his tests.

Bromo Soda.

“I have tried your Bromo Soda in cases of Nervous Headache and Sleeplessness, and find it an excellent remedy, relieving headache and giving natural sleep in a few minutes.”—J. D. NOLAND, M. D., Bate, Ohio.

Selected Cases from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

By JOHN DUNN, M. D., of Richmond, Va.,

CHIEF OF CLINIC OF RICHMOND EYE, EAR AND THROAT INFIRMARY.

CASE XII.*—Contusion of the Eye-Ball—Dislocation of Lens, with Rupture of its Capsule—Separation of Iris at its Periphery—Remarks on the Progress of the Case.

July 15th, 1892. Walter J., aged 9, on July 2nd, struck his eye against the barrel of a toy rifle. Treatment since then had been cold applications and atropia. Condition today: Pupil is semi-elliptical in shape, linear above, curved below; atropia dilates only the lower segment; pupil clear, red reflex, except just above the lower border, where, by throwing the light downward, the lower border of the lens can be seen; by throwing the light against the upper part of the pupil, the part of the lens behind the iris can be seen to show considerable haziness; directly above, the iris, for about 3 mm., is separated from its attachments at the corneal junction; into the hole made by this rupture the lens has been forced, and is here beginning to be opaque; $V = \frac{4}{200}$; some ciliary irritation, especially marked is this in the neighborhood of the rupture of the iris; tension normal; no pain on pressure; no subjective sensations of pain in the eye; ciliary zone increases when light is thrown into the eye; anterior chamber is deep in its lower half, but almost obliterated over the ruptured iris, showing that the blow had been applied on the lower segment of the ball. No view of the fundus. If there had been any hæmorrhage into the anterior chamber, the blood had been absorbed; no visible rupture of the lens capsule, although lens appears to be swollen where it has been forced through the iris into the anterior chamber.

Consideration as to what treatment should be instituted in this case, brought up one or two questions. Atropia, cool applications, and protection from the light were the first suggestions. What would become of the lens thus dislocated? It was plainly pressing against the ciliary bodies above, as evidenced by the depth of the ciliary zone at this

*The numbering of these cases refers to the order in which they are being selected for Report and Remarks from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

point; as there was no rupture of the capsule, it seemed little likely that delay would improve matters. There were, however, two points that seemed to allow of delay, viz.: There was no increase of tension; the eye was not painful on pressure, this latter point showing that, although there was pressure upon the ciliary bodies, it was as yet slight. While the appearance of either increase of tension or ciliary pain, especially if at all severe, would call for immediate removal of the lens, was it justifiable to wait for one of these to appear before the operation should be attempted? Removal of the lens would apparently be rendered easier by the position it had assumed; the ruptured piece of iris would, however, have first to be excised, an operation the proximity of the lens to the cornea above it would make a little difficult; and, further, the zonula had been ruptured, which would necessitate a loss of more or less vitreous following the extraction of the lens.

Another question presented itself. Would it be justifiable to rupture the capsule, with the lens dislocated as it was? The lens could not be shoved back into place. Such a procedure might be allowable, were there no evidences of impending ciliary disturbance. A cyclitis in the presence of a ruptured, dislocated lens is not always pleasing to contemplate. In this case, should ciliary trouble supervene, the lens in its capsule could be more readily removed than a swollen one with, perhaps, part of its substance in the anterior chamber, or with adhesions between the lens capsule and the iris, a thing very likely to occur with the iris ruptured as it was.

There was still another question suggested by the case, and it comes up with every case of monocular cataract in young persons. Granted that the cataract should be entirely absorbed, what amount of usefulness would remain for this eye? Vision, with a proper lens, would be fairly good; but even with $V = \frac{20}{20}$ for distance, this eye would either not be used as long as the other eye remained healthy, or should it be used, the muscular efforts necessary

for accommodation would, in all probability, result in squint.

Judging from the cases I have seen, squint, generally external, develops, sooner or later, in all cases of monocular cataract in young children, where this cataract has been removed, either by extraction or absorption. (I mean in all cases where the second eye is normal.) My experience here has, however, been small, and in none of the cases I have seen have the patients worn continuously correcting glasses. In very young people, the further development of the eyes, unequal after the extraction of the lens, lends its heavy weight to the production of squint.

As to the cosmetic effect of a black pupil, which may be urged in favor of the extraction of the cataract, most people would prefer a cataract to glasses and squint. Others urge the removal of the cataract is justified by the greatly increased field of vision that follows. In the part of the field added after the extraction of the cataract, nothing is seen distinctly without a glass, even before the development of the squint; while after its development, the glass is useless. And, further, should the cataract be removed perfectly, the patient must be seen from time to time, and this eye subjected to tenotomy as often as there appears a tendency to squint.

There is another objection, and not the least one, to the removal of monocular cataract in very young children (the second eye being good); it is a fact that, in a large per cent. of these cases, the results of the operation are far from satisfactory, and often, in the most skilled hands, disastrous, depriving the patient of any hope of vision, should ill fortune overtake the good eye. All things considered, it would seem best, in cases of young children, with monocular cataract—and it is often the result of traumatism—to defer operation until the child has attained his growth, at which time the immediate result of the operation will be equally as good as it would have been, had the operation been done in early childhood; while the increased in-

telligence of the patient, and his willingness to follow directions in regard to the use of the eye, will be of assistance in maintaining a favorable result.

Thus, in the case of Walter J., aged 9, the most favorable prognosis looks to complete absorption of the lens, and, if this take place, fairly good vision at first; later, squint, probably external, with loss of use of the eye. In this case, the general health of the patient was excellent, and, in considering the possibilities of obtaining the best results compatible with the extent of the injury in ocular traumatism, much weight must be given the constitution of the patient. This is an extremely important point. A slight blow upon the cornea of a healthy child may be recovered from without leaving a trace; the same blow upon the cornea of a syphilitic child may be the starting point of an interstitial keratitis, with results the most disastrous.

Cool applications, atropia drops, and small doses of pilocarpine was the treatment ordered in this case, with instructions to return immediately should any pain be felt in the eye. The patient was allowed to play out of doors as much as he wanted to—the injured eye being, of course, protected from the light.

July 19th. Condition same as July 15th, except that the lens is further opaque. V=perception of light. No sign of rupture in the part of the lens projecting above the separated portion of the iris. No pain. No increased tension.

July 25th. Increase in the depth of the circumcorneal zone, especially where lens is pressing against ciliary region; which shows that there has been further swelling of the lens, with increased irritation. Although there was no pain, decided to remove lens, should this redness around cornea show further increase.

July 30th. Distinct rupture of the lens capsule, centrally along the protruding part of the lens. Considerable absorption of lens substance has taken place, so that the inferior border of lens now occupies central region of the pupil. Circumcorneal zone less deep. No pain; no increased tension.

August 17th. Complete disappearance of all signs of irri-

tation. Three-fourths of lens absorbed. Capsule drawn up into the region of rent of the iris. V with a $+12D=\frac{14}{10}$.

August 25th. Absorption of lens complete. Dislocated portion of the iris has descended so that its lower part lies just above centre of the pupil, which is still elliptical. No signs of irritation about the eye.

Sept. 8th, 1892. Condition of eye as August 8th. V with $+12D=\frac{18}{10}$.

The only remaining question is whether, in this case, it is advisable to prescribe a $+12D$ lens for constant use. The age of the patient makes it little likely that he would derive any assistance from its use, inasmuch as the vision of O D is so much superior to that of O S with the glass; that of O D will, sooner or later, be relied upon to the exclusion of O S. No glass will allow the boy to read with the same ease and rapidity, and through the same range, with the injured eye as with the healthy one. The patient can, however, read large print with a $+16D$. No glass was prescribed.

CASE XIII.—A Case of Detached Retina Caused by a Bullet Fired into the Retro-Maxillary Fossa.

On January 21st, 1892, Mr. A. consulted me about his right eye. History as follows: On December 19th, he had been struck by a bullet, fired from a Smith and Wesson, 32, just below the lobe of the right ear; his right eye had swollen immensely; under cold applications and the use of leeches, this swelling had finally disappeared, but had left the eye useless. Examination, January 1st, revealed the following condition of affairs: Directly below the lobe of the right ear, in the retro-maxillary fossa, was a vertical scar, half an inch in length, evidently not a very old scar, since the tissues about it were more or less thickened. There was considerable swelling, with thickening in the region of the right masseter muscle and parotid gland; patient was unable to separate his teeth more than 10 mm.; attempts to force his jaws apart were very painful; no pain on this side of his face, save occasionally, when he forgets and rests this side of face in his hand; complete paralysis of the frontalis of the right side, no response to the faradic current; partial paralysis of the orbicularis palpebrarum; patient cannot turn the right eye outwards as far as normally, showing interference with the external rectus; no

pain in the eye; tension normal; slight conjunctival disturbance; no other evidence of disturbance; V=perception of light; pupil dilates ad maximum under atropia; examination of the fundus gives red reflex only for a small space at the upper inner part of the eye; almost complete detachment of the retina; remnants of blood clots in the vitreous. Left eye normal.

The course of the bullet was about as follows: It must have been directed slightly forward; striking the posterior edge of the lower part of the ramus of inferior maxillary, it glanced forward, passing through a part of the parotid gland; continuing its course upward and forward, it passed interiorly to the zygoma, and then through the greater wing of the sphenoid, probably just at its junction with the malar bone; passed into the orbit, where it struck the eye-ball, after injuring the lower border of the external rectus; owing to the denseness and elasticity of the sclerotic, and to the amount of tissue already passed through, the ball was unable to enter the eye-ball, but was thrown back into the orbit, the force with which it struck the ball being, however, sufficient to cause a well-nigh complete detachment of the retina.

The inability to open the mouth may have resulted from injury to the inferior maxillary; or may have been, partially or entirely, spasmodic from injury to the facial nerve, which injury had caused the paralysis of the frontalis and orbicularis palpebrarum; the swelling of the "eye-ball and lids" was caused by the injury done the orbital tissues at the time of the entrance of the bullet. No attempt was made to extract the bullet, as it was not the cause of any present pain in the eye or about the orbit. Treatment proved of no avail, as far as causing a re-attachment of the retina was concerned.

Chemical Food is a mixture of Phosphoric Acid and Phosphates, the value of which physicians seem to have lost sight of to some extent in the past few years. Messrs. R. A. Robinson & Co., to whose advertisement (on page 28) we refer our readers, have placed upon the market a much improved form of this compound, "Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

Correspondence.

Percentage of Results of Examinations by the Medical Examining Boards of Virginia and Alabama.

Dear Dr. Edwards.—In your July issue, in commenting on the percentage of rejections of the Examining Boards of Alabama, as compared with the Examining Board of Virginia, you demonstrate by the figures presented that the Virginia Board has had a much higher percentage of rejections.

I beg leave to call your attention to the following facts: In Virginia you have but one Examining Board for the State, and your total rejections are 117 of 399, or 29.2 per cent.

In Alabama we have a State Examining Board, but we also have an Examining Board in each county, where most of the examinations are made. Of course these county Boards vary in their standard of qualification, and the results of examinations by such Boards cannot be compared with those of State Boards.

The percentage of rejections by the Alabama State Board is 41.16.

Very truly,

BENJ. J. BALDWIN, M. D.,

Ex-Pres. Med. Ass'n of State of Alabama.

Montgomery, Ala., Sept. 10th, 1892.

Dr. L. S. McMurtry, of Louisville, Ky., was unanimously elected President of the American Medical Association of Obstetricians and Gynæcologists at St. Louis, September 22d. We congratulate the doctor, and are sure the Association could not make a better selection.

Salicylic acid is said to be an effectual remedy for tape worm. It should be given in doses of eight grains every hour until forty grains have been taken, then follow with a full dose of castor oil.

Proceedings of Societies, Boards, etc.

MEDICAL SOCIETY OF VIRGINIA.

The *Twenty-third Annual Session* convened, by invitation of the proprietor, Capt. C. A. Colhoun, at *Alleghany Springs, Va.* (the invitation extended last year to meet at Luray, Va., having been withdrawn because of the destruction by fire last fall of Luray Inn), at 8 P. M., Tuesday, *September 13th*, 1892, and adjourned about 10 P. M., Thursday night, to partake of a banquet tendered by Capt. Colhoun.

During the session, about 150 Fellows were in attendance, beside the following invited guests, fraternal delegates, etc.: Drs. J. A. Tanner, of Boston, Mass.; Joseph Price and J. Betton Massey, of Philadelphia, Pa.; Sam'l T. Earle and Wm. Lee Howard, of Baltimore, and Sam'l J. Fort, of Ellcott City, Md.; Irving C. Rosse, of Washington, D. C.; Edw. Ricketts, of Cincinnati, Ohio, and ——— Pratt, of New Orleans, La. A notable attraction was the number of wives, daughters, and lady friends of the doctors who accompanied them to this far-famed summer and health mountain resort.

The several meetings of the Session were presided over by the President, Dr. H. Gray Latham, of Lynchburg; Vice-Presidents Drs. J. R. Gildersleeve, of Tazewell; Geo. T. Walker, of Vinton; Wm. P. McGuire, of Winchester, and the President-elect, Dr. Herbert M. Nash, of Norfolk, after his installation on Thursday. Dr. M. D. Hoge, Jr., of Richmond, assisted the Recording Secretary, Dr. Landon B. Edwards, of Richmond, throughout the Session.

During the Session, 38 joined the Society. During the first night, there was a large audience of ladies and gentlemen, besides members of the Society, fraternal delegates, etc.

Dr. Jacob Michaux, of Richmond, Va., was introduced, and delivered the "Address to the Public and Profession, announcing as his subject: *The Medical Examining Boards.*" The only means of reforming medical education in any State, he believes, is by such a Board. He pointed out the absolute necessity for—(1.) Preliminary academic examinations prior to admission into medical schools; and (2.) That the teaching and examining departments should be separated. He also suggested that the several State Examining Boards should be made Boards of Health. He cited the much higher requirements of European countries both as to medical and academic branches.

The Committee on Prize Essays presented in competition for the Prize of One Hundred Dollars, offered by Honorary Fellow Dr. Hunter McGuire, of Richmond, for the best Essay deemed worthy of the Prize on **Tetanus** (Drs. C. W. P. Brock and Thos. J. Moore, of Richmond; Herbert M. Nash, of Norfolk; J. Herbert Claiborne, of Petersburg, and W. L. Robinson, of Danville), reported in favor of the Essay signed "Non Sine Semine." The corresponding envelope, opened by the Secretary, contained the name of Dr. Charles M. Blackford, Jr., of Lynchburg, Va., to whom the Prize of \$100 was awarded. (See page 547.)

During the Session of Wednesday Morning, Dr. H. Gray Latham, of Lynchburg, Va., delivered his *Address by the President*.

The subject for general discussion—

Vertigo,

Was opened by Dr. E. T. Brady, of Marion, Va., who, after general remarks upon the nature of vertigoes in general, spoke of them as gastric, cardiac, cerebral, laryngeal, ocular, aural, toxic, epileptic, and essential, and stated briefly the characteristics of each. He held that laryngeal vertigo was but a form of epilepsy, and that as we progressed in diagnostic powers, the toxic form would be found to include the larger number. He stated, as his belief, that a far greater number of cases of vertigo were due to nervous causes than to any disturbance of the intra-cranial circulation. The effect upon the nerves might be produced by one of three causes—(a) the direct mechanical or chemical effect of poisons, or imperfectly oxidized materials accumulating in the blood; (b) pressure upon the centres governing equilibrium; (c) reflex, from acute localized inflammations, the equilibrial centres being disturbed by unusual impressions caused by and deflected from associated nerve-fibres. In speaking of the gastric form, he called attention to the fact that it was not with violent indigestion, but rather with *prolonged or delayed* digestion, that it was most apt to be met with. In mentioning aural vertigoes, he called attention to the fact that deaf-mutes were free from vertigo; and he seemed to infer, from this fact, that the sense of hearing enters largely into the causation of vertigoes. He omitted epileptic vertigo from the discussion as being a variety of epilepsy, and as deserving of more detailed treatment than could be accorded it in so limited a space of time. He said but little as to treatment, except to recommend a trial of co-

caine locally in Meniere's disease, and suggest the advisability of producing deafness in intractable cases. He closed with some remarks as to general treatment, especially commending pepsin, pancreatin, and lactic acid.

Dr. Bedford Brown, of Alexandria, Va., said that vertigo is not a disease, but a symptom resulting from diametrically opposite conditions. It often precedes fatal post-partum or other uterine hæmorrhage. Some of the most violent types of vertigo occur in the hysterical diathesis. Alcohol and tobacco, by their toxic action on the brain and sympathetic nerves, are fruitful causes of vertigo. Temporary indigestion and protracted dyspepsia (biliousness) cause "sympathetic vertigo." There are also uræmic and other forms of vertigo. Hence, therapeutics as to this affection must vary with the case in hand. When vertigo results from plethora or congestive conditions, antiphlogistics—such as cathartics and simple diet—are required. When left ventricular hypertrophy induces high arterial tension, digitalis and nitroglycerine are the remedies. Iron and strychnine are useful in the anæmic. Full doses of ammonia valerianate and sodium bromide act promptly in the hysterical and nervous forms of vertigo. For the vertigo of albuminuria, nitroglycerine—gr. $\frac{1}{50}$ three times daily—with saline aperients and diuretics, are valuable. Diuretin or theobromin salicylate, two to five grains in capsules, every two or three hours, is the best of eliminants. In "bilious" vertigo—vertigo sympathetic, with indigestion—correct the acid fermentation and putrefactive action by alkalies, and follow by hydrochloric acid, pepsin, strychnia, bismuth subnitrate, etc. In feeble nervous states, pills of valerianata of iron, quinine, and zinc, are excellent. Always test the urine for albumen, casts, and sugar, in marked tendencies to vertigo. Chronic nephritis and diabetes mellitus are almost invariably attended with more or less vertigo; benefit will usually be found from the use of a grain of codeia at night, nitroglycerine and tincture of chloride of iron, with anti-diabetic diet during the day.

Dr. Joseph A. White, Richmond, Va., who limits his practice to diseases of the eye, ear, nose, and throat, stated that four forms of vertigo appear more or less frequently in his practice: *Aural vertigo* accompanies hyperæmia and anæmia and apoplectiform troubles of the labyrinth (Meniere's disease), which are usually associated with corresponding brain alterations. Impacted wax or other compression of the labyrinthian fluid, alterations of the vestibule and ampullary

nerves, etc., cause vertigo. *Ophthalmic vertigo* results from lack of co-ordination of the ocular muscles. Some authors speak of *nasal vertigo*, but Dr. White thinks such cases belong to aural vertigo. *Laryngeal vertigo* consists of a laryngeal spasm, followed immediately by vertigo and loss of consciousness—generally complete. An apparently healthy person is suddenly seized—rarely with premonition—with mild laryngeal irritation, without assignable cause, which causes a slight cough. Dimness of vision and dizziness follow immediately, and the patient falls in a state of complete unconsciousness, which lasts only a few seconds. The condition is so much like petit mal that some term it “laryngeal epilepsy.” Rarely is any lesion discernible in the larynx, although some cases have seemed dependent on a chronic laryngitis.

Dr. Wm. C. Dabney, of the University of Virginia, remarked upon the frequency of various forms and degrees of vertigo, and the presence in the blood oftentimes of toxic matters, which he thought was the cause of most cases of stomach and renal vertigos. Of course remove the cause when practicable. But when this seems impossible—especially in cases of renal vertigo—he recommended the use of small doses ($\frac{1}{10}$ th grain) of morphia to afford temporary relief. Of course so powerful a medicine cannot be indiscriminately prescribed, nor used continuously, in increasing doses.

Dr. Joseph Price, of Philadelphia, Pa., said that nowhere was the saying, “Diagnosis made, the patient is half cured,” more true than in its bearings upon vertigo. As to opiates, he wishes the opium habit were confined to patients—those who take the drug. But, unhappily, he has daily to recognize the far more pernicious “opium habit of the profession”—of those who prescribe the drug. This potent drug should not be prescribed except where there is a clear indication for its use; and it is to impress caution upon those who may feel tempted, to follow the advice just now given by the eminent professor of the University of Virginia to use morphia in renal vertigo, that he has spoken. He thinks the treatment recommended by Dr. Brown the acme of perfection.

Dr. Brady, in closing the discussion, stated that of course he has seen the evil results of the incautious use of morphia, but it must not be forgotten that, in desperate conditions, bold measures have often to be taken. Opium is often useful, indeed essential, to obtund nervous sensibility in certain

cases of renal vertigo; and it was in such cases that he approved Dr. Dabney's advice. Ordinarily, he condemns the use of morphia in kidney diseases.

Dr. Chas. W. Gleaves, of Wytheville, Va., read a paper on **Mysteries of Medicine,**

In which he recounted many of the curious records of ancient medical history, the changes of opinion which have gradually developed age by age, and mentioned some facts indicating yet in the practice and recommendation of physicians ludicrous or absurd ideas. Quackery and charlatantry were liberally exposed and held up to ridicule.

During the Afternoon, the following elections, etc., were made: Dr. Herbert M. Nash, of Norfolk, Va., *President*; Drs. Wm. P. McGuire, of Winchester, T. James Taylor, of Walthall's Store, and A. Z. Koiner, of Roanoke, *Vice-Presidents*; Dr. Landon B. Edwards, of Richmond, *Recording Secretary*; Dr. J. F. Winn, of Richmond, *Corresponding Secretary*; Dr. R. T. Styll, of Hollins, Va., *Treasurer*; Dr. Hunter McGuire, of Richmond, *Chairman of Executive Committee*; Dr. Hugh M. Taylor, of Richmond, *Chairman Publishing Committee*; Dr. Wm. D. Turner, of Fergusson's Wharf, *Chairman Committee on Nomination of Applicants for Fellowship*; Dr. John S. Apperson, of Marion, Va., *Chairman Necrological Committee*. Dr. J. T. Graham, of Wytheville, was elected to deliver the *Annual Address to the Public*—1893. *Subject for General Discussion*, 1893, is CHRONIC NEPHRITIS. Dr. R. M. Slaughter, of Theological Seminary, Va., *Leader*. Charlottesville, Va., was chosen as the place of next annual meeting, at such a time during October, 1893, as the local profession may select. About the same gentlemen as now compose the *Board of Medical Examiners of Virginia* were nominated for Commission by the Governor to serve on the Board for the next Quadrennial Term to begin January 1st, 1893. To fill resignations where parties declined re-election, etc., Drs. Paulus A. Irving, of Richmond; R. S. Martin, of Stuart; and Wm. L. Broadbuss, of Newtown, were elected.

Drs. Joseph Price, of Philadelphia, Pa.; H. Grey Latham, of Lynchburg, and Landon B. Edwards, of Richmond, Va., were elected *Honorary Fellows of the Society*.

Dr. R. S. Martin, of Stuart, Va., read a paper on--

Puerperal Fever.

He said it was generally accepted as true that every case of puerperal fever was due to infection which enters the sys-

tem per vaginam. He related two cases treated: *First*, a lady, on the fifth day after labor, had a severe chill, followed by temperature 104° and pulse 160; respiration, 40; she had suppressed lochia and vomiting. Intra-uterine irrigation, with 1:3000 bichloride of mercury solution, by means of a fountain syringe to which was attached Chamberlain's intra-uterine tube, was given. In three or four hours, her temperature became normal and pulse 96. Slight rises occurred the next day, when the irrigation was repeated, and this was repeated daily for several days as a matter of precaution. Iodoform was applied around the cervix. This case made a good recovery, and had no rise of temperature after the second day. *Case Second*.—Abortion at the fourth month. He saw the case two days after. She had a chill, followed by fever and offensive lochia. On examination with Erich's speculum, he found a part of the placenta in utero. This was removed with curette. Intra-uterine irrigation of bichloride of mercury was used (1:4000), and iodoform was applied to the interior of the uterus. A dose of castor oil was given, and vaginal douche of hot water ordered daily. This case also made a rapid recovery. He said that during the first years of his practice, with but little local treatment, and relying principally on internal treatment, he lost most of his cases; since using the improved method, he had cured all so far treated.

Dr. Pryor's treatment was detailed, which was about as follows: If a case is seen early, wash out the uterus with one or two quarts of a solution of bichloride of mercury (1-4000) at temperature of 110° F. About ten minutes afterwards, wash away mercury solution with boiled water to which has been added a teaspoonful of common salt. After this, if temperature does not fall in two hours, use continuous irrigation with warm saturated solution of boracic acid or boiled salt water. This should be kept up for some hours after the temperature falls, with an occasional douche of bichloride (1-5000 or 1-10000). After this, 20 grs. pencil iodoform is introduced into the uterus, and the patient is then let alone.

What is to be done if, by above treatment, the temperature does not fall? Laparotomy should not be performed except in rare cases, though to do this was the general teachings until recently. In its stead, he offers as a generally curative procedure, curetting the uterus and packing it with iodoform gauze, 5 per cent., plain mull, or lamp-wicking; the two latter should be boiled before using. Wash out the

uterus after and before curetting with 1:5000 bichloride solution. Dr. Pryor's treatment in full is published in the July number, 1892, of the *International Journal of Surgery*.

Dr. Martin also reported a very interesting case of *Strangulated Inguinal Hernia* of four days' standing. Operation was performed; gut returned to the abdominal cavity. Gut sloughed by tenth day. Fecal matter passed for three weeks by the artificial opening, and gradually closed, so now she passes her fecal matter per rectum, and is able to do her housework, and is in good health.

Honorary Fellow, Dr. Joseph Price, of Philadelphia, Pa., stated that, abdominal section for puerperal fever had often of late been rightfully condemned. The operation has undoubtedly frequently been injudiciously resorted to for this disease. Puerperal fever is due to many causes. Many cases in reality set in even during pregnancy—before labor—and may be due to a small hidden fibroid of the uterus. Patients must have died of this fever without any one knowing of what disease they died. While performing the Credé method of expressing the placenta, we sometimes find an unsuspected uterine fibroid. He reported a case in his practice several years ago in illustration. The patient had pyæmia—with the very train of signs and symptoms belonging to puerperal fever. He operated after discovering the tumor, and after a hard fight for life the patient recovered. So that puerperal fever is not always an infectious disease, due to septic germs introduced from without, as we have been informed. Every puerperal womb should be looked upon as of the nature of a wounded womb. With an abnormal tumor in its walls, such as a fibroid, etc., it is easy to suppose that almost continuous kicking, twisting, jumping movements of a quickening fœtus may bruise the tissues, cause inflammatory action, and, under continued repetition of the cause, result in pus formations in or about the fibroid.

Of course, however, cleanliness in maternity work cannot be too much emphasized. He always uses a vaginal douche before as well as after a labor, and keeps everybody and everything in connection with the patient surgically clean. Thus, in the Maternity in Philadelphia with which he is connected, of 700 labors during the past year, not a patient died.

Child-bed fever is common enough over the whole world. It is epidemic now in Los Angeles. During the past year, there were 18 deaths in Pattersonville, N. J., due to this dis-

ease. Even in these usually healthy towns, there is something wrong with the physicians, nurses, or surroundings. Since he graduated in 1877, there has been in the Philadelphia Maternity about one death from puerperal causes in 700 labors. This Maternity is largely used for educational purposes. A patient applies at the Clinic for professional attention during her expected confinement. Her name, age, residence, etc., are recorded. She is told to have her house thoroughly cleaned before labor sets in. Then a nurse is to visit her place to see that all is right. Dirty people are not to be allowed to visit her. The student applies for assignment to the case at 7 P. M. He is told to keep his mouth shut, and his eyes and ears open—let the patient suppose he is a doctor. He may make examinations as often as he wishes, but he must thoroughly wash his hands, etc., each time before and after examination, in a 1:2000 bichloride solution. He is told to burn up his compends, etc., but to read a good standard work on obstetrics. He should be taught that a woman should never die of child-bed fever, or better, she should never have it.

Dr. Jennings, of 700 labors, lost only two cases. A midwife attended one; in the other case, the child was putrid *in utero*. That this woman had had fever is very certain. Nothing short of section can save some cases, as in the case just referred to. During the past six months, he has seen 18 cases. On six, he did abdominal section; and lost three patients. In private practice, of 11 cases only one got well by non-operative methods. Purgation is better than no treatment. Relief must come early. But if anything abnormal is in the pelvis, nothing short of surgery will save. Even in the cleanest cases, nine out of ten non-infected cases of puerperal fever are due to pus-tubes or ovarian abscesses. At present, everything in New York is exudates and infiltrations; but these are only the signs and symptoms of the puerperal condition.

The tendency was to curette everything; but the deaths from incisions were too frequent. Then the tent treatment was begun, but this, too, brought deaths. Then they began to dilate the uterine canal; but now even Dr. Emmet, who was formerly an advocate of it, says it does more harm than good; as is also now said of the forceps. At last, now, it is the endometritis craze. True, there is such a disease. Dr. Price has removed 92 fibroids in so many cases of so-called "endometritis," and has always incised the uterus to get them out. None of these cases were fit for curetting, nor

did he find any granulations. In vagino-hysterectomies, when everything is diseased, he has found tumors. Of 56 cases of malignant uterine tumors, no case suitable for cutting was found. In a healthy woman, five days after labor, with temperature of 98.5° , the decidua vera looks like it does on the second day of fever, when the temperature may be 103° . Dr. Price raises his voice against tinkering. All cases of labor must be looked upon as wounded women. All injuries to the parts received during child-bed are to be treated as ovariectomy cases. Preston Retreat mortality, with about 200 confinements a year for six years, has not yet had a single death. The discipline in that institution is fashioned after that at West Point—it is military. Patients are received two weeks before labor, and remain four weeks after labor. The plumbing for the building is built about twelve feet from the Hospital, and air thus circulates between the main house and the water-closets, bath-rooms, etc. There is not a spigot in the house. The patient, before labor, has to take two full baths a week, and is given clean clothes. If she has a vaginal discharge, she gets a vaginal douche. She goes into a special delivery-room, where the nurse and doctor wash often with mercuric solution. Mercury is the only one antiseptic worth anything. The moment the child is born, it is given over to the nurse. The placenta is expressed. He seldom has occasion to give chloroform. After delivery, the vaginal canal, etc., is douched. Then the patient is taken out of the Ward and put in a room to herself, on a hair mattress, and then into the Ward, where she is to remain two weeks on a clean straw bed. Don't spare the laundry; use plenty of sheets. Any spot on the sheet is enough to call for a clean one. All the mothers nurse their children; there is not a bottle-fed child in the Retreat.

Plumbing inside of a hospital can be readily detected by watching the temperature charts. Under healthful surroundings, the patient's temperature should not exceed 98.6° ; but if the plumbing for the Hospital is at all defective, then there is a rise of temperature in the post-partum patient. Ante-partum mercuric douches should be used frequently to prevent ophthalmia neonatorum. If every woman in Pennsylvania had the ante-partum douche, then the number of cases of ophthalmia neonatorum in that State would be so reduced as not to furnish more than one in five blind persons in the Blind Asylums.

Dr. Edw. Ricketts, of Cincinnati, Ohio, spoke of the use

of the vaginal douche in puerperal cases. He thinks the causes of puerperal fever or infection must lie in the vagina and not in the uterus.

During Wednesday Night's Session, on motion by Dr. E. W. Row, the sum of one hundred dollars was voted to be paid the Medical Examining Board of Virginia as a refund of expenses incurred by the Board in prosecuting a notorious quack before the Hustings Court of the City of Richmond last spring for undertaking to practice medicine in Virginia illegally.

Dr. Edw. Ricketts, of Cincinnati, Ohio, by invitation read a paper on—

Colonic Irrigation and Feeding per Rectum—How Best Attained.

(See page 570.)

Hypnotism as a Therapeutic Agent.

After explaining the difficulties one encounters in dealing with the history of this subject, Dr. Wm. Lee Howard, of Baltimore, Md., gave a comprehensive idea of the limits of hypnotism, but decidedly objected to the name—hypnotism—as it implied sleep. As he showed further on, in but few cases are we obliged to put our patients in a state of hypnosis. In his opinion, hypnotism is a curious chapter in psychology, and has already proven helpful to mental science, if not to therapeutics. But the effect upon the operator is very severe, and continually kept up on several cases without mental rest, in himself has produced some very injurious conditions. On one occasion, after demonstrating the various conditions of hypnotism upon several cases, continuing several hours, before a number of the profession, he arose from the table, pitched head-forward, and remained in a cataleptic state for several hours. Under the same conditions, without rest, he has acted like one under the influence of liquor or a drug. Of course this was due to attempting too much at one time. In individual cases, or especially those cases in which you wish to produce simple anæsthesia for surgical operations, the effect is *nil*. Dr. Osler writes: "It is a two-edged sword, and needs careful handling." Dr. Howard then reported the following case, upon whom he wished for once to make an experiment: B. B. was the subject. Dr. Wilmer Brinton saw the demonstration. After showing him all the conditions, Dr. Howard told him that a subject could be given any criminal suggestion, and it would be carried out. Calling the subject to him, Dr. H. said, "You see that old man on the corner?" "Yes."

"Well, I want you to go up to him and steal his gold watch and chain, and bring it back to me." Quietly and cunningly engaging Dr. Brinton in conversation, he neatly abstracted the watch and chain and gave them to Dr. Howard. He told him to keep them in his pocket. Then Dr. H. told him to sit down, and at once brought him out of this state, and Dr. Brinton asked him for his watch. It was really sad to see his expression and hear his protestation, and when he found the watch was dumfounded. Having known Dr. Brinton, he at once left the room without saying a word. Here is where Dr. H. says he made a mistake. He should have given him a post-hypnotic suggestion while he sat in the chair, telling him that when he woke up and a watch was found in his pocket that it was all right. Dr. H. left the office for a half hour, and upon returning found his subject rigid on the floor, but protesting he did not steal the watch. Some of Dr. Howard's family and Dr. Gorter were strenuously trying to bring him out of this condition, but of course with no success. At Dr. Howard's command, he jumped up at once and went down stairs. There he had another attack, and Dr. H. was finally obliged to stay with and put him into a normal sleep, during which he suggested that when he awoke he would forget all that had occurred. The suggestion was successful. This was a valuable lesson. Dr. Howard desires that all public demonstrations of hypnotism should cease; laws should be enacted allowing only reputable medical men to practice it. He agrees with Liegois, that hypnotic subjects can be made to commit any crime—he will not say all subjects, but a large proportion; and for this reason he believes in instructing our law-makers in the facts, and he who disputes a fact is a subject for instruction, not argument.

Gonorrhœa in Women.

This was the title of a paper presented by Honorary Fellow, Dr. George Tucker Harrison, of New York city. He claims that it is no trifling complaint, as ordinarily regarded, but serious in its consequences. To Næggerath credit must be given for first drawing attention to this disease. The results of the experiments and investigations coinciding with the clinical facts, go to prove that all the inflammatory processes appearing in consequence, whether in the tubes, ovaries, peritoneum, or in the broad ligaments, may not only be produced by the gonococcus of Neisser, but, in fact, are so produced. This germ produces a group of diseased condi-

tions peculiar to the female. This state of things may exist, even years, in the affected person, before it displays any of the characteristic phenomena. He declares that the wife of a man who, prior to matrimony, with few exceptions, has been the victim of gonorrhœa, will, sooner or later, develop some one of the diseases referred to—asserting, further, that 90 per cent. of the cases of gonorrhœa remain uncured, and that of 100 women who marry men who have been afflicted with gonorrhœa, hardly 10 per cent. remain healthy. These diseases are classified under four groups. (1) Acute peritonitis; (2) Recurrent perimetritis; (3) Chronic perimetritis; and (4) Ovaritis.

Of late years, by experiments and the microscope, the existence of the gonococci in pus, taken from the diseased tubes, is demonstrated almost beyond doubt, and it is generally conceded that most of the inflammatory conditions of the tubes are of gonorrhœal origin, or can be traced to this disease. This is denied by Bumm, pertaining to peritonitis, he claiming that the gonococcus of Neisser is only able to penetrate "*cylindrical epithelium*," and not closed "*squamous epithelium*," and he therefore denied a gonococcus peritonitis, but that the gonorrhœal *pus*, acting as a foreign body, becomes encapsulated, and does not lead to an actual inflammation. In order to explain pelvic peritonitis, as a sequence of secondary gonorrhœa, Bumm claims a secondary infection—a mixed affection—the Fallopian tubes, from the first attack of gonorrhœa, becoming more susceptible. Other *authors* claim that the gonococcus of Neisser is capable of penetrating even striated squamous epithelium, so that Bumm's strongest argument is refuted, if their doctrine is believed; hence, the greater weight of authorities seems to be against Bumm's position, and there is no reason to blame a secondary infection.

Symptoms.—Uterus enlarged, sensitive; menstruation profuse, painful, and too frequent, accompanied by dysmenorrhœa. From the uterus the infection readily extends to the Fallopian tubes, producing purulent salpingitis, the pus, through this route, reaching the peritoneal cavity, producing a circumscribed peritonitis, involving, to a greater or less degree, the ovaries and the broad ligaments. Pains ensue; pus extends from the distended tube of the corresponding side. In consequence, inflammatory action is set up; the tube becomes occluded by adhesions; then distended, loses its curves, and becomes "*sausage-like*," any over-exertion bringing on acute attack, producing peritonitis. Great

nervous symptoms are induced, resulting in neurasthenia or hysteria. Sterility often results.

Diagnosis is decided by the symptoms. Clinical history; but the most reliable is the demonstration of the gonococcus in the pus by the microscope.

Treatment.—Prophylaxis naturally, first of all, claims our careful consideration. Can the disease be stamped out and eradicated by legislation? He thinks it hardly practicable. The general practitioner has it in his power to correct the great and growing evil to a large extent. Gonorrhœa in the female is more to be dreaded than syphilis. The gynecologist should be careful in dilating a woman's womb who is affected with gonorrhœa, as it can be so easily carried into the uterine cavity, and then into the tubes, etc. Operative procedures are not always demanded; dilating the uterus, curetting and packing with iodoform gauze will often relieve. When these conservative methods fail us, then the surgeon's more radical interference is demanded. Operative intervention is only justifiable when it is no more dangerous than the disease itself. Owing to advances in antiseptic surgery, the risk is robbed of many of its dangers; but the environments of the patient must play an important part in the treatment. A woman in comfortable circumstances, who does not have to work, may be spared these attacks by *palliative* means, to which her less fortunate sister is exposed who has to perform her daily duties of a more or less onerous nature. The latter demands immediate relief of a permanent character, and willingly submits to an operation. The extirpation of the pyosalpinx is doubtless justifiable.

Common Sense in the Treatment of Discharge from the Ear

Was the subject of an article by Dr. Alexander Duane, of New York, N. Y. He pointed out the importance of this subject, as the general practitioner is generally prone to slight it. The therapeutic principles to be enforced are the same that govern suppuration anywhere else—viz: cleanliness, drainage, and the removal of the badly diseased tissues. Irrigation, with a solution of common salt, he thinks best for thorough cleansing. As all details are usually committed to the patient, they should receive the most careful attention. Politzerization to force out the residual discharge may be used as an adjuvant to the syringe. Astringent powders (boric acid, alone or combined with zinc oxide), should be used if this treatment does not cure, but only

after thorough cleansing by irrigation. In removing the granulations and polypi, have a good light, and the patient under full control. The recurrence of the granulations can be checked by the use of alcohol, with or without the addition of corrosive sublimate. In cases of caries, use iodoform. Except in extensive caries, or when the drainage is prevented either by position (in the attic) or by inflammatory hypertrophy, these measures are usually successful. But if they should fail, the diseased parts (drum-head and ossicles) should be removed at once, and by a specialist if possible, as the operation requires great delicacy of manipulation. Dr. Duane believes that this treatment will cure nearly all cases of chronic suppuration, avert the danger of cerebral involvement, and do away with the necessity of a mastoid operation.

Acute Inflammatory Earache.

In the paper by Dr. J. Herbert Claiborne, of New York, N. Y., on this subject, he included only those cases due to acute inflammation of the lining of the middle ear cavity. It occurs most frequently in childhood. The pain is sometimes described as "stabbing" in the depth of the ear; sometimes as throbbing; autophony is very painful; hearing diminished. The otoscope shows that the reflex of the drum just below the hammer handle is lost or blurred; the drum appears reddish-gray or fiery-red in severe cases; a clump of exudation usually pushes out the drum in some part of its area. The causes are those that cause acute colds.

As to treatment, to relieve the pain—even temporarily—let hot 10 per cent. solutions of cocaine be instilled into the outer ear for five or ten minutes. In adults, leeches behind the tragus are useful. Hot solutions of boric acid instilled into the outer ear. Paracentesis should be discarded because of the danger of injuring something not intended in children. If undertaken, however, adopt the method by a slit in the drum membrane, as proposed by Schwartze and von Troltsche. Inflation by the bag and by the continuous method with the Eustachian catheter—gradual, long-continued, and repeated inflations—three or four times in two hours. The administration of a drastic dose of Epsom salts acts nicely on congestions of the upper air tract.

Of local remedies, apply the hot salt or hot water bag over the ear. A better remedy is a piece of spongiopilin, wet in hot water and applied over the whole region. Bliss-

ters behind the ears are of no use in acute aches, but are often serviceable when the acute stage has passed.

During Thursday morning in the paper by Dr. S. W. Dickinson, of Marion, Va., on

Some New Ideas That are Old,

He pointed out many facts to show that our present ideas about disinfection are simply a revival of practices as far back as the days of Ulysses. The contagiousness of puerperal fever was known long before Semmelweiss again proved it to be true. Neurasthenia, thought by some to have been first described in 1868, by Bouchat, was written about by Cheyne in 1733—in fact, by Gregory King in 1696. In the same way, many of the questions about insanity, thought to be of recent suggestion, were freely discussed early in this century. Cold baths were used for fevers during the sixteenth century, and thermometers were used to test the temperature of patients in disease as long ago as 1707. Supra-pubic cystotomy for stone was done before 1561, and for the relief of cystitis due to prostatic troubles by Benj. Bell, in 1790. Other instances of long ago origination of ideas and practices now being introduced as new were mentioned.

Injuries of the Knee—their Treatment and Results, with Special Reference to the Prevention and Cure of Suppurative Action In and About the Joint,

Was the title of a paper read by Dr. M. W. O'Brien, of Alexandria, Va. He thinks it should be a surgical rule, that absolute rest by fixation should be given the joint and entire limb from the body down, in the case of every wound into or near the knee-joint, and in every congestive or inflammatory condition of that joint. Antiseptic surgery should be used to draw out any serum that may be infused into the knee-joint cavity; the foot should then be raised, and the entire limb put up in plaster—the Bavarian dressing being the best—with the leg straight. This plaster makes both extension and counter-extension, securely locks the joints, holds every muscle firmly but gently in its place, and puts the reflexes to sleep. The limb rests, the circulation is equalized, pain is relieved, heat and fever go, and the patient rests without an opiate. This splint can be opened, like a book, if needed, its whole length, the joint inspected, etc., and the mold put back and held with a roller; in brief, the limb is kept in a position as comfortable as possible. Never dress a knee-joint injury in a flexed position. This is con-

trary to the views of many surgeons, but experience and results prove that a flexed enclosed leg is a nuisance—particularly so if the flexion is great. With fixture in a straight position, perfect rest is secured. To apply evaporating lotions, and put the leg at so-called rest on a pillow, as advised by many text-books, is simply ruinous to the leg. But by keeping the leg straight in the plaster dressing, as spoken of, it is rare to have pus or ankylosis. If pus does form, lay the joint widely open, wash the fluid out thoroughly, put in drainage tubes, and flush everything out as often as may be necessary with corrosive sublimate water, and improve the general condition of the patient by food and the use of quinine. The joint can be flushed without disturbing it, by leaving the joint bare for some inches, and connecting the portions of the splint above and below the knee by zinc strips under the joint, extending well up on the thigh and down on the leg. It is surprising what can be done for chronic suppuration by (1) freely opening the joint at the pus salients; (2) washing and flushing the joint and pus cavities with bichloride solution; often (3) by putting the leg straight while the patient is under ether; (4) holding it so with plaster—from the body to the toes. Thus treated, he has seen a temperature of 105° F., and pulse of 160, with constant nausea and diarrhœa, subside in a day; bed sores heal rapidly and the sweats stop—in a word, the most appalling constitutional condition subsides like magic, and a useful limb result from this line of treatment. Without antiseptics, of course, no such result could be attained. In all cases of severe injury or wound involving the knee-joint, dress it immovably and put the leg at rest in a straight position.

Dr. Chas M. Blackford., of Lynchburg, Va., read a paper on—

Bacteria and Disease.

He states that bacteria affect the human system in many ways: (1.) The bacterium directly attacks and destroys the tissues in which it lodges; thus in inflammations followed by pus formations, pyogenic bacteria, are probably directly responsible. (2.) A by-product of the life of the micro-organism is the agent that immediately does the damage. Thus, in tetanus, the active poison is an alkaloidal product, or mixture of such products, resulting from the life of the bacillus tetanus. The alkaloidal products may be isolated, and are as certain to produce tetanus if in-

troduced into the system in sufficient quantities, as morphia is to produce its physiological effects. (3.) Some bacteria are pathogenic only at times; under some peculiar environments, they acquire malignancy. (4.) Conversely some bacteria that are naturally violent and malignant in unsuitable media, become attenuated, so that inoculation produces only a mild type of the disease.

After briefly stating the modes by which different species of bacteria differentiated, he notes that in order for it to be regarded as the cause of a disease, the suspected bacterium must fulfill the following conditions: (1.) It must be present in all cases of the disease. (2.) It must not be found in the body except during the course of the disease; but this condition must be liberally interpreted, for there are conditions under which the same bacterium seems to be malignant at one time and not at another. (3.) It must produce the disease when properly introduced into an animal susceptible to that particular disease.

Tyndall long ago showed that the motes in the air are the origins of the micro-organisms found in pubescent material. Acting on this fact and on the results of Pasteur's experiments in the same direction, Lister conceived the idea that by excluding these germs from a wound, or killing them if they gain admittance, putrefactive processes would not occur in the wound, and healing by "first intention" would result. So he devoted much care and study to dressing to accomplish this, the details of which are familiar. The principal opponent to antisepsis is Lawson Tait, but so thorough is his asepsis that antisepsis is unnecessary in his practice. Anthrax or malignant pustule, particularly attacks wool sorters, and usually ends in death from the many abscesses incident to the disease. It is caused by specific bacilli in the blood and tissues of those affected. An interesting fact regarding them is their culture media have power to increase or diminish their virulence. The most plausible mode in which anthrax bacilli cause death is that they separate the complex combinations in the organism into toxic substances. The discussion of this paper lasted two hours and a half.

Dr. Joseph Price, of Philadelphia, thinks Senn's statement that "at this time surgical pathology has almost become synonymous with surgical bacteriology," is rather too sweeping. Even Lister is not so enthusiastic over antisepsis as formerly. Too close following the dicta of such teachers has often lead to carbolic acid poisoning in mid-

wifery. The whole ground is covered by adopting the "gospel of cleanliness"—absolute cleanliness—and simple pure water is all sufficient. There should be no wiping of hands just before the operation with towels which have probably come from the towel rack in the bath-room. The finger nails should not be colored so as to remind one of badges of mourning. In short, everything should be surgically clean before, during, and after operations—patient, doctor, nurse, bedding, dressing, instruments, room, etc. The new school of surgeons has done wonders, but don't forget the old school also did much. McDowell was a dude in dress and cleanliness. But speaking so earnestly as to the necessity of cleanliness in every detail, Dr. Price intended his remarks as especially applicable to practice in cities where foul traps of sewer pipes, etc., are numerous. In healthy mountain sections where population is sparse, no infectious diseases exists, drainage first-rate, privies off from the houses, ventilation perfect, etc., such thorough details may not be altogether essential. Now, as to mortality of "solution surgery," those who depend on sprays of so-called antiseptics during operations, beclouding the room with vapor and obscuring incisions with streams of spray—note the results. The mortality of Listerian followers is still great. Many of the patients on whom the operation is quickly and well done fail to recover promptly because of the chemicals used in their practice. Bantock, who uses no antiseptic during operations, did ninety-one ovariectomies without a death. But Thornton's mortality was 9 per cent. Meredith did 144 operations with thirteen deaths. Heath did eighty-four operations with two deaths. All of these eminent men operate in the same hospital. But difference in results is due to difference in methods adopted. Dr. Price does not deny some virtue in chemical surgery; in fact, chemical cleanliness will aid the surgeon, but must not be carried too far, or he will impair the healing quality of the divided tissues, or even may fatally poison the victim. If cleanliness is maintained, Dr. Price does not dread germs except in the dressing. He has no confidence in the paraphernalia usually sold by surgical instrument dealers, for they, as a class, sell goods with soiled hands, or that have been handled many times by doctors who have wished to examine the stock. Dirt, whether under the finger nails or about the dressing, is injurious. Tait practices surgery under almost ideal cleanliness—not under chemical antiseptic sprays or washes; and he knows of no one who can surpass

Tait. The "solution surgery" men are now backing down from their former position. The principle is to sterilize everything used in surgery. Silk ligatures are of animal origin, and are sterilized by dropping them a short time into boiling water. But if the surgeon will use chemicals for the purpose of securing cleanliness, be careful to keep them out of the wound; they are all irritants, some are toxic. Dr. Price advises purely from a practical surgical point of view, not from a bacteriological standpoint. Surgical cleanliness is hard to obtain.

In response to question as to his methods of practice, Dr. Price detailed the steps followed in his hospital on a patient on whom he is to operate. She is scrubbed with water and soap—head and all—and purged when she comes in. She is bathed before operation in a mercuric bichloride solution. Rooms are kept clean, and all assistants, nurses, etc., are as clean as soap and water can make them. Instruments are sterilized in a tray of boiling water. His instruments are the knife, a pair of scissors, two drainage tubes, six hæmastic forceps, an irrigator, sterilized bandage and gauze, ether. He separates the tissues as he goes as far as practicable by cleavage, always keeping the palmar aspect of his fingers towards the operator's face. As soon as he can, he defines the pedicle and ties it close to its root with a figure of eight ligature; cut off and remove the tumor, evacuate the pus, place the irrigator in the lower part of the incision, then turn the patient on her side, put in two ligatures, and put the patient to bed. If temperature rises he knows something is wrong.

Dr. L. G. Pedigo, of Roanoke, Va., defended Listerism. Of course Lister went too far at first; but progress comes by stumbling and correction. It took Lister fifteen years to get professional attention directed to antiseptic surgery; but now, with its improved methods, it has come to stay—its general principles are established. Germs cause suppuration and destruction of organic tissues; but chemical agents are sufficient to destroy them. Lister's followers have defined the general character as surgical filth, and have gone to work to destroy it, as well as the soil. Tait practices Listerism. He thinks Dr. Price goes too far in his claims for aseptic surgery as opposed to antiseptic. In fact, he trusts Philadelphia hydrant water for washing his wounds, although he boils only a part of what he uses. Yet, if the report of the health officers of that city be true, that water is notorious for impurities, etc.

Dr. Thos. J. Moore, of Richmond, Va., says the medical press has of late been too radical in its advocacy of asepsis, when, in truth, surgical practitioners of to-day are modifiers—are trimming off the angular points which misshape the truth. Ten years ago a distinguished surgeon said that the doctrine of bacterial effect in surgery had come to stay only a few years, and it appears now that he was a prophet. Those who have advocated the germ causation of disease have not been those who made advances in the practice of medicine—he is not referring to surgery. There is something not yet defined that causes disease. Pasteur has not demonstrated that life is essential to fermentation. Anti-septic surgery has done great good. Listerism brought about a relative degree of perfection; asepsis is simply a step in advance of antiseptis.

Dr. G. Betton Massey, of Philadelphia, Pa., states that he had been a believer in germs for ten years, as the cause of disease. In fact, his convictions are so strong that he would think himself a murderer if he did not conduct his practice on this basis. Indeed, it is clear that the small minority of the profession who still say they don't, really do believe in germs. This is shown by boiling the water in which to keep their instruments, to dress the wound. They say they do it to get rid of the "filth"—why not say "germs," or "bacteria," as the case may be? Their acts speak louder than their words. Technical loop-holes for death should be closed. The safeguards in the healthy subject against the effect of disease-germs are the white corpuscles (phagocytes) in the blood. They are constantly engaged in destruction of germs. According to the number of normal phagocytes in the blood are human beings able to resist the effect of disease-germs.

Dr. S. T. Earle, of Baltimore, Md., said that much of the cause of discussion seemed to be simply a matter of difference in the means employed, and of terms, to secure the same results. Dr. Price, for example, sterilizes his ligatures in hot water in advance, and leaves them in the abdominal cavity to be digested or absorbed, without risk; whereas if he sterilized them by certain chemicals, they might not be absorbable. The important point in undertaking any operation is to decide what is, and what is not, obnoxious material to be used in the wound. Undoubtedly, it is the life of germs that we have to battle with in practicing surgery and obstetrics. A good deal of Dr. Price's success is due to the

few ligatures he applies, as increase in number of ligatures increases the amount of necrotic tissue.

Dr. Joseph Price remarked that exceptionally few wounds unite if germs are destroyed or prevented. On one occasion, he had to excise both mammae on a woman—both being alike in size and condition. He determined to try chemical antiseptics on one and simple cleanliness, with soap and water, on the other breast. The side on which he used antiseptic dressings was slower in getting well than the other, which he dressed simply with occlusion pads, etc. Philadelphia hydrant water is highly organic, and, as physicians, we ought to try to put a stop to the using of water, for drinking and household purposes, which comes in along sewers, etc. He always uses distilled water in his surgery. River water is better than other water if boiled the night before.

Dr. Thos. J. Moore mentioned the practice of one of his doctor friends who kept up douching of the vagina before, during, and after labor. Another old doctor friend did nothing of the kind, and yet had as good results as the antiseptic doctor.

Dr. Blackford closed the discussion by saying that Dr. Price had discussed practice—not principles. Sterilized earth-dressing of wounds acts by killing the micro-organisms that may come upon it. Antiseptics is an old practice. The preservation of the Egyptian mummies furnishes an illustration of this practice. The whole principle involved—whether by antiseptics or asepsis—consists in the effort to neutralize what Dr. Price prefers to term surgical filth, but which is generally included under the head of bacteria.

During the Afternoon, a paper on *Woman's Position in the Medical World*, by Honorary Fellow, Dr. W. W. Parker, of Richmond, Va., was read by title.

A paper on *Some Ocular Diseases in Childhood*, by Dr. Phillip Taylor, of Richmond, Va., was also read by title.

Dr. Joseph A. White, of Richmond, Va., read a paper on *Cataract*; and

Dr. L. G. Pedigo, of Roanoke, Va., read one on *Some Uses of the Iodides*.

Dr. F. M. Brooks, of Fairfax Station, Va., read a paper on *The Continued Administration of Digitalis*. [See page 575.]

In the next paper, on

Excision of the Female Breast,

Dr. Robert O. Owen, of Lynchburg, Va., stated that many

growths within the female breast are, or will become, malignant if neglected. Painful enlargements of the breast, not ordinary abscesses, should be watched and excised if the slightest disposition to malignancy presents itself. He reported the following case to explain the method he now advocates as the best. Miss L., aged 19, slight family history of cancer, had (April 2nd, 1892) an ulcerated scirrhus of the right breast. The patient being anæsthetized, after the breast was made aseptic by soap and water, sulphuric ether, and mercuric bichloride (1-2000) solution, two semilunar incisions were made above and below, and the growth excised. Bleeding was controlled by torsion, and the oozing was left alone. Deep interrupted sutures were then taken every half inch at each extremity of the wound. The flaps were then drawn together at each extremity. A needle threaded with fine silk, brought the skin in close apposition along the entire closed line of the wound. The wound was then flushed out through the drainage tube (still *in situ*) with a quart of warm Thiersch's solution. After this tube was withdrawn, the openings through which it had passed were closed by deep and close superficial sutures. The whole length of the incision was then painted with iodoform collodion. The oozing having been left uncontrolled, the entire cavity filled with blood, which could not escape on account of the superficial sutures, and which by its pressure controlled further oozing. Thirty-six hours after the operation, one deep and several of the close superficial sutures at each end of the wound were removed, and by gentle bi-manual pressure the contained clot was removed. The wound was then flushed with Thiersch's solution, and injected with a small syringe of the following:

R_x.—Aristol..... ʒj
 Acidi boracici..... ʒss
 Ung. resinæ..... ʒj
 Olei olivæ..... ʒiij
 Acid cabolat (liquid)..... ʒss

M. Sig:—As directed.

Two pads of moist Linton gauze were then placed respectively over the upper and lower flaps. The pads were held *in situ* by long bands of rubber adhesive plaster extending from above the clavicle to the middle of the abdomen, and extending half way round the body. These plaster strips not only held the pads in place, but equalized the pressure and prevented any strain on the sutures. Over this was placed one thickness of Linton gauze, and then a

thick layer of borated cotton, covered by another thickness of gauze. The whole was covered by a piece of oiled silk and secured by a roller bandage. This was removed, and on the sixth day after the operation the superficial stitches were removed; on the tenth day the deep sutures were removed, and on the eighteenth day the patient returned home perfectly cured.

One of the chief points in his paper was to control the bleeding vessels by torsion. Some surgeons erroneously seize the bleeding point and adherent surrounding tissues *en masse*, and by a vigorous twist try to stop the bleeding. This does more evil than good, as when twisted so tightly it is apt to slough and give foreign matter in the wound; and if not twisted tightly, there is a probability of secondary hæmorrhage.

Dr. Owen separates the vessel from the surrounding tissue as cleanly as possible, catches it at the end with a pair of Koeberle's forceps, and draws it out; then with another pair of forceps he grasps the vessel a quarter of an inch from the end and holds it firmly while giving two or three steady turns with the forceps which holds the end. Sometimes he uses a serrafine, but it should be accounted for just as in abdominal operations.

The great feature of this operation is the perfect closing of the wound after cleaning and allowing it to fill with oozed blood. The most valuable partizan of modern antiseptics can but acknowledge that one's own blood is aseptic as regards one's self, and no more rigid asepsis can be preserved than to allow such a cavity to fill with the patient's own blood. Dr. Owen does not approve of losing time by trying to control the oozing with hot water, etc., but thinks the method described is the surest and quickest, as in the case of Miss L., who drove home across the country fifteen miles on the eighteenth day after the operation.

A Successful Case of Colotomy for the Closure of an Artificial Anus

Was reported by Dr. Samuel T. Earle, of Baltimore, Md. Dr. Wm. Halsted's (of the Johns Hopkins Hospital) method of enterorrhaphy was used, with great satisfaction and gratifying results. The patient made a good recovery; had his first evacuation from his bowels per rectum on the sixth day after the operation, and left the hospital at the end of the third week.

During the Night's Session, Dr. Irving C. Rosse, of Washington, D. C., read a paper on—

Sexual Hypochondriasis and Perversion of the Genesic Instinct.

Omitting reference to such subjects as spermatorrhœa, venereal excesses, tertological conditions of the genital organ, the high degree of excitement often found among the insane, he limited his paper to the consideration of the manœuvres of either sex to produce venereal orgasm independently of the conditions of normal coitus, and known comprehensively as genital abuse. [This paper will appear in our November number, 1892.]

Dr. Samuel J. Fort, Superintendent of Font Hill Private Institution for Feeble-Minded, Ellicott City, Md., by request read a paper on "*What Shall be Done with the Imbecile?*" which will appear in our November number, 1892.

Dr. G. Betton Massey, of Philadelphia, Pa., read, by invitation, a paper on—

Modern Electrical Methods as a Substitute for Surgery in Certain Pelvic Affections,

In which he treated of fibroid tumors, "diseased ovaries," and displacements. He had treated sixty-eight fibroids by various modifications of the Apostoli method, and had had the unexampled record of seven complete disappearances of the tumors by electrically-induced atrophy—one of them as large as the adult head. Sixty-four cases were successes, nearly all of them showing various degrees of shrinkage, and all of them being symptomatic cures. Cystic and abnormally soft tumors are not adapted to the method. The profession was urged to look for and *treat the little tumors*, which are rarely properly diagnosed. The electrical treatment of the conditions, known by the patients themselves as "diseased ovaries," for which wholesale castration is now so largely practiced, consisted mainly of a local treatment of the uterus, as it was the author's experience that so-called salpingo-öophoritis was preceded and accompanied by a more serious microcobic catarrh and hypertrophy of the uterus. The conventional diseased ovary was a myth rather than an affection of primal importance, the graver cases of cystoma, abscess, and tuberculosis, excepted. He did not deny that inflamed ovaries and tubes are daily removed by abdominal section; but the unfortunate fact remains that the patients from whom they were removed, when they recover, are rarely in better health afterwards, and are often made worse, because the real source of suffering was left in the inflamed uterus. A plea was made for the recognition and proper treatment of the metritis in

these cases, and it was pointed out that the galvanic current applied within the uterus, under proper precautions, and at a proper dosage, was the most efficient agent for promoting resolution and restoring tone. In this way the patients may be cured, remaining whole women, though nine-tenths of the present brilliant abdominal surgery remains undone. The same facts applied largely to the treatment of uterine displacements, the use of pessaries failing to cure the initial inflammatory enlargement to which the altered position of the uterus is due.

Honorary Fellow, Dr. Joseph Price, of Philadelphia, Pa., read a paper on—

The Treatment of Hard Tumors in the Pelvis.

He remarked that it was in Virginia, his native State, that abdominal surgery had its birth. Wm. Baynham successfully operated twice before Ephraim McDowell—another Virginian—did his memorable operation. Dr. Price advocates early treatment of small abdominal and pelvic tumors before real danger develops. Pus is often only the result of inflammatory changes in tumors. Undoubtedly, cases of pus in the pelvis have gotten well without surgery; but, as a rule, it kills unless removed. One would be a fool to stand quietly by in such a case and advocate the “let alone treatment.”

Dermoid tumors especially require early attention. You may suspect one of these when the tumor is small and very painful. The point of suppuration may be far distant in such cases, but the pain is none the less severe, and the urgency of the case is unquestioned. Dermoid tumors are especially liable to degenerate with the formation of extensive inflammatory adhesions and pus. This being the case, the same rule applies to the removal of such cysts as are applied to the removal of pus itself, to-wit: Get rid of it as soon and as entirely as possible. Because the abdomen and pelvis form a covered region, it should not, therefore, be treated by hysterical or hypnotic measures, any more than a calculus in the bladder, an ingrowing toe-nail, or a suppurating bubo. If suppuration and pain are reasons for early operations, so the results of these complications are still greater reasons for early surgical attention. As adhesions must follow inflammation, and thus interfere with the functions of the bowel, bladder, etc., it is only a confession of ignorance as to what surgery can do for these tumors, to leave them to the “conservative forces of nature.” The

wise and conscientious surgeon will not defer the operation until the case is hopeless, nor will he hesitate to operate if the patient has a chance of recovery, nor will he promise absolute and wonderful recoveries in order to secure the operation and the fee. Too often such a consideration does the operation while a dabster is behind it reaching for the fee and the undertaker is waiting for the patient.

Another danger of small hard tumors, especially in the pelvis, is that they interfere with conception, and often with delivery. A dermoid on one side may bring on abortion after abortion, when the other side is entirely healthy, and so cause much useless suffering, both mental and physical, in anxious and disappointed women. Hard tumors of the uterus, whether large or small, are accompanied with just such dangers as have been described; and the longer they are allowed to grow, and the more they are interfered with in a meddlesome way the more dangerous do they become. In Dr. Price's experience, contrary to the assertions of some statisticians, they occur with far greater frequency in white than in colored women. They are now more prone to undergo dangerous degeneration than heretofore; hence their early removal is all the more to be urged from a pathological standpoint.

The nature of the neoplasm determines whether or not an operation is justifiable. So the attending doctor, if not familiar with the history of the affection, finds his knowledge must be supplemented by consultation. Tumors of the uterus, though small, may be dangerous on account of their shape, as they often assume fantastic shapes, and thus attack by pressure any organ in their vicinity, as the kidneys, bladder, or rectum; while, in their general mass, they may interfere with pelvic circulation to a certain extent. As results of such pressure, we may have much œdema and pain, while the cause itself seems altogether inadequate. Small tumors are easier to operate on, and are less complicated. The greater the increase in size the longer the incision and longer the operation. Large tumors often have extensive adhesions to bowel, omentum, and peritoneal parietes. This, in small tumors, is the exception. Hence another advantage of early operation. Bowel repair and control of hæmorrhage in the pelvis are not simple work. If the tumor is allowed to undergo cystiform degeneration or other malignant changes, the result of the operation is all the more serious. Rupture of the cyst may occur with leakage, and general peritonitis begin; while the malignant

element, if present, may invade the whole abdomen. In many uterine fibroids, the appendages are also diseased. The ovaries may degenerate into cystoma, while the tubes are also apt to be occluded and charged by some poisonous fluid, adherent and deeply embedded in the pelvis.

After general remarks, including a glowing tribute to Dr. Hunter McGuire, etc., Dr. Price stated that in puerperal hysterectomy, the verdict of experienced operators is strongly against the intra-peritoneal method of procedure—eleven dying out of sixteen treated by this method. Yet some, especially Germans, insist that this is the ideal method. Fortunately, it has been abandoned by experienced surgeons elsewhere. Tait expressed regret that he was ever tempted to use it; and his opinion is sustained by Bantock and others whose successful work make the glory of English surgery. The extra-peritoneal method in puerperal hysterectomy gives nearly perfect results, and puts an end to all subsequent surgery on the subject, and precludes recurrence of the disease. In hysterectomy, the method practiced by Tait, Bantock, and others, is to secure the stump outside the abdominal wound by a *serre-nœud*. This is preferred because the stump is composed of contractile tissue, which, by its shrinkage when constricted as a whole, relaxes the pressure on the vessels, and opens up the danger of fatal hæmorrhage. The extra-peritoneal method is the only assurance against hæmorrhage.

The Kœberle-nœud is the best of instruments of its kind when carefully applied to a well-made pedicle—transfixed by two long pins before cutting away the tumor. Draw the pedicle firmly into the lower end of the incision, stitch the parietal peritoneum below the line, and close the incision.

The value of elastic ligature method lies in the fact that the ligature contracts upon the tissues as they shrink, and thus maintains a continuous contraction. Drs. Bantock and Keith prefer the *serre-nœud*. The consensus of opinion is in favor of Kœberle's *serre-nœud*.

Among accidents following the operation, may be constriction of one or both ureters, constriction of a portion of the bladder, inclusion of a portion of the bowel in the *serre-nœud*, etc. The accidents may be avoided by incising the capsule high up on the tumor—four to six inches above the bladder or below the tubal and ovarian attachments to the tumor. Retract the capsule of the tumor to the surgical neck of the uterus or to the circumference of the internal

os. The pedicle should consist of cervical tissue only—small, reduced, and carefully constricted. The risk of hæmorrhage, sloughs, and suppuration, above the pedicle, are minimized by making a small pedicle, well-placed in the lower angle of the incision. To apply the serre-nœud about the base of the large irregular tumor, without first manufacturing a pedicle, is dangerous. Always use drainage where there are extensive adhesions or pathological changes due to pressure. The tubes should be kept dry and clean. Use three or four stitches between the tube and pedicle. In the after-treatment, dry dressings give the best results, and need not be changed for ten or twelve days. Silk-worm gut is the strongest, smallest, cleanest, least irritating, and most reliable of the suture materials. Maintain recumbency for six or eight weeks to favor organization and consolidation along the incision.

The doctor closed by referring to the frequency of insanity following hysterectomies, ovariectomies, etc. But, on the other hand, it must not be forgotten that as many, if not more, cases of insanity are cured by the operations.

Adjourned *sine die*.

Analyses, Selections, etc.

School Over-Pressure in Children Causing Brain Mischief—Symptoms Suggesting Typhoid Fever.

J. A. Diggle, L. S. A., of London, says (*Hosp. Gazette*) that the following cases show the inadvisability of attempting to force children forward in schools without sufficiently considering their different individual capacity for learning. It is much too common a cause of children's ailments, and has not been enough considered by parents and teachers. In the ordinary board school, every child in each standard must be pushed on, *pari passu*, with all the others, so as to get all, if possible, passed at the examination next ensuing into the standard above. In the first case here noted, the fault, *fons et origo mali*, was with the parents in sending such a young child to school at all. Both cases were very similar in the outset, but the first was the most severe, and in both it was thought at first the illness was enteric fever.

CASE I.—Alf. C., more than usually intelligent, age four years and eight months, was seized, April 3rd, at breakfast

with sickness and pain in the head. He had been attending school for six months, and had been encouraged to learn, and had already reached the final class in the infant department. When seen at 11 A. M., he was in bed, slightly flushed, head very hot, temp., 99.2° ; tongue rather foul; pain in the head, and avoids light. No further vomiting since breakfast. Gave a mixture of potass. citrat. and tinct. aconiti and calomel, gr. j., with sugar.

April 4th.—Passed a bad night, rambling and talking. Tongue rather cleaner. Temp., 99.4° . Milk diet. Continue mixture. Night temperature same as morning. Added potas. bromid. gr. ij., $\bar{a}\bar{a}$ dose to medicine.

5th.—Night much the same as last. Lies very quiet and still, but easily roused, and then quite conscious. Temperature, 100.2° . Thirsty. Tongue furred, but moist. No pain in abdomen. Stool natural. Ordered antipyrin, grs. v., every three hours. Temp. at night, 100° . Been delirious all afternoon. Ordered ice-bladder to head.

6th.—Rather better this morning. No diarrhœa. No spots on abdomen. Head, however, very hot, mother having taken off ice-bag at 4 A. M., as child slept. To be replaced. To have 5 mins. bromidia (Battle) every two hours. Temp., 100.2° ; night temperature same.

7th.—Much better. Fairly good night. Slept four hours. Playing with toys on bed. Temp., 99.2° . Tongue cleaner. Continue bromidia mixture.

8th.—Not quite so well. Ice-bag again neglected. To be continued, as also mixture.

9th.—Much better. Sitting up playing. Temperature, 99° . Ice-bag discontinued. Same mixture.

10th.—Improving fast. Not much appetite. Quin., gr. $\frac{1}{2}$, t. d. s.

11th.—Up and dressed. Still improving. No headache or pain. Temperature normal. With the exception of a slight cough, all went on well until 14th, when he was dismissed.

The good effect of the ice and bromidia was very quickly apparent in this case, as also in the next.

CASE II.—John B., a strong, sturdy lad, just over seven years of age, was anything but fond of lessons, but in drawing he excelled. Having failed last year in the examination, his teacher had been urgent as to his passing this time, and had been, perhaps, rather too sharp on the lad. A fortnight before the examination, April 21st, he was seized, also at breakfast time, with vomiting and pain in

the head. When Mr. Diggle saw him, in the forenoon, he was lying on a bed-chair, very drowsy, and resenting being roused. Had vomited every few minutes since breakfast, at which he had only drunk a cupful of coffee. Head very hot. Pupils contracted; buries his face in the pillow. Temp., 100°. Ordered cold water cloths to head until ice-bladder could be got, and a potass. citrat. mixture.

April 22nd.—Sickness relieved. No delirium, but wanders when roused. Ice to head. Bromidia, m. v., every two hours. Night much the same. Temp., 100°.

23rd.—Much better. More easily roused, and sensible, though when left to himself lies quiet for hours. Temp., 99°. To continue bromidia and ice.

24th.—Better. Sitting up in bed with his drawing-book. No dullness or drowsiness. No pain at all. Appetite not good. Quin., gr. $\frac{1}{2}$, t. d. s.

25th.—Appetite improved. No bad symptoms. Temperature normal. Playing about the bed-room.

26th.—Ceased visiting. Boy going on well.

The rapid improvement under the ice and bromidia treatment was very gratifying. Mr. Diggle has found bromidia especially useful in such cases, and a very reliable hypnotic whenever required to prescribe such a medicine.

Relations of Pelvic Disease to Psychical Disturbances in Woman.

In the paper on this subject by Dr. Geo. H. Rohé, of Cartonsville, Md., read before the American Association of Obstetricians and Gynæcologists in St. Louis, Mo., Sept. 20-23, 1892, he pointed out the frequency with which bodily conditions influenced mental states. Thus a torpid condition of the intestines, Bright's disease, putrefactive processes in the intestinal canal, etc., might give rise to melancholia and other disorders of the mental functions. It is not irrational to suppose likewise that diseases of the female sexual apparatus would have a not inconsiderable influence in the production or perpetuation of mental disorders. As a contribution to the knowledge of the subject, the following report was submitted:

In a hospital containing 200 insane women, 35 were subjected to vaginal examination, and 26 were found with evidences of pelvic diseases.

In 18 of these the uterine appendages were removed with the following results: Sixteen recovered from the operation and two died. Of the sixteen recovered, three have been

discharged from the hospital completely restored both physically and mentally. In 10, considerable improvement followed the operation in both physical and mental conditions, and in three the operation was of too recent a date to allow any definite expression of opinion.

The mental disorder present in the 18 cases was: Melancholia in 6, simple mania in 1, puerperal mania in 4, hysterical mania in 1, periodic mania in 2, hystero epilepsy with mania in 1, and epilepsy with mania in 3.

The author, basing his opinion upon his experience, concludes as follows: The facts recorded demonstrate—1st. That there is a fruitful field for gynæcological work among insane women; 2nd. That this work is as practicable, and can be pursued with as much success, in an insane hospital as elsewhere; and 3rd. That the results obtained not only encourage us to continue in the work, but require us, in the name of science and humanity, to give to an insane woman the same chance of relief from disease of the ovaries and uterus that a sane woman has.

Clinical Report of Gall-Bladder Operations.

In the paper by Dr. Rufus B. Hall, of Cincinnati, Ohio, read before the Association of Obstetricians and Gynæcologists at St. Louis, Mo., Sept. 20-22, he reported seven cases—all of the gall-bladder operations that he had made. In three, the common duct was obstructed from three to seven and nine weeks respectively. The case with obstruction for three weeks recovered from the operation. The case with obstruction for seven weeks had gall stones for eight years before operation, and at the time of the operation had a stone impacted in the common duct, and malignant disease at the head of the pancreas involving and obstructing the common duct. The case with obstruction for nine weeks had a stone so firmly impacted that he had to incise the common duct for its removal. The three cases were *in extremis*, at the time of operation, from the long-continued cholæmia. The cases with obstruction for seven and nine weeks died from exhaustion on the third and sixth days after the operation. The remaining cases in which the cystic duct was obstructed recovered, making five recoveries and two deaths. With the light of his experience, Dr. Hall would hesitate to advise an operation in cases where there had been complete obstruction of the common duct for seven to nine weeks. The powers of recuperation in such profound and continued cholæmia are so feeble that we can

hardly hope for other than a fatal termination. The author is strongly inclined to the opinion that there is a causative relation between gall-stones and malignant disease in and about the gall-ducts and head of the pancreas. He thinks that the long years of continued irritation from the presence of gall-stone, and the consequent repeated attacks of hepatitis, favor the development of malignant disease in and about the gall duct. He urges early exploration in obscure hepatic diseases of a number of years' standing, even if a positive diagnosis of gall-stones cannot be made, and cites a case in which he removed 91 gall-stones under similar circumstances. In that case the patient had pain in the region of the gall-bladder and liver, but no other signs of gall-stones. If early operation was made, there would not be so many cases of obstruction of the common duct, with the high mortality following that complication. If all of the cases operated upon, where the common duct was obstructed, could be tabulated, the mortality would probably be very great. On the other hand, the operation in cases where the common duct is not obstructed the mortality is very small. These facts should be sufficient to warrant early exploration.

Vegetable Alteratives in Chronic, Venereal, Tubercular, and Malarial Diseases.

Dr. Thomas H. Manley, Visiting Surgeon to Harlem Hospitals, etc., of New York city, in a most readable way says (*Doctor's Weekly*) that the time has not arrived when medicines can always be prescribed according to rules fixed on scientific basis. Every practitioner, for instance, has prescribed quinine, ferruginous and arsenical preparations, etc., for malarial, tubercular, or syphilitic anæmia without benefit, when they have changed their prescriptions to some fresh infusions, decoctions, or tinctures, with immediate good results. Indeed, pharmacy now yields a number of vegetable elixirs, so palatable and easy of assimilation, to which we may well give a protracted trial in most tubercular and syphilitic diseases, even of bones and joints, before deciding on surgical treatment. Cod liver oil has long held its own in the treatment of consumption. But there are many phases of surgical tuberculosis, chronic syphilis, etc., in which neither cod liver oil nor any of its preparations seems well borne. Here the vegetable tonics, particularly those rich in the alkaline salts, are invaluable. The tincture of hops, decoction of sarsaparilla, gentian, columbo,

or chamomile, either alone or in combination, may be taken. A valuable combination of herb extracts was elaborated in the South as a substitute for mercury and potassium iodide during the late war, when pharmaceutical supplies were shut out by the blockade. It is known as Verrhus Clemiana, and is composed of clematis-erecta, prinus-verticillatus, fraxinus Americana, rhus-glabrum, and one-eighth of one per cent. of venanatic acid—all indigenous in the Southern States. Dr. Manley has extensively employed this compound in many cases of chronic, tubercular, glandular and bone diseases, besides other wasting maladies, with excellent results.

Pneumonia Successfully Treated by Transfusion of Blood from a Convalescent Case.

Dr. Wm. Hughes, of Philadelphia, Pa., reports (*Therap. Gazette*, Oct., 1892,) perhaps the first instance in which the new antitoxine method has been followed in America. The treatment, of course, is based on the belief that pneumonia is a specific infectious disease. We regret not having room for a report of the case, which progressed satisfactorily and resulted in recovery.

Salicylate of Soda for Sprains.

M. Larabee, without claiming priority, speaks (*La Semaine Med.*, No. 30, 1892—*Amer. Jour. Med. Sci.*, Oct., 1892,) of the markedly satisfactory result obtained by using one drachm [internally or externally is not stated, but presumably internally,] in twenty-four hours for a tibio-tarsal sprain. Next morning there was no pain, and in four days cure was complete. His results were equally good, whether or not the rheumatic or arthritic diathesis was present.

Antitoxin Successful in Tetanus—Tetanus Bacillus Anerobic, etc.

At the Innsbruck Surgical Clinic (according to *Buffalo Med. and Surg. Jour.*, Oct., 1892), another case of tetanus has been cured by the hypodermic injection of 0.15 to 0.20 gramme doses of Tizzoni and Catlani's antitoxin, obtained from the blood serum of a dog, rendered artificially immune to tetanus. Tetanus bacillus, being anerobic, will not develop in presence of air, and therefore produces its morbid effects only when buried deep in the tissues. Hence tetanus, as a rule, occurs chiefly in deep-seated punctured or lacerated wounds produced by toy-pistol injuries, splinters

from the floor (holding one or the other of the four toxines of tetanus), etc. Pure cultures of tetanus bacillus are obtained by excluding air from the culture-medium by passing hydrogen gas through it, or inoculate the agar-tube by introducing the needle deep into the interior of the agar. Garden earth abounds in tetanus bacilli—some soils, as on an island near New York, being especially rich in tetanus bacilli.

Book Notices.

American Text-Book of Surgery for Practitioners and Students. Edited by WILLIAM W. KEEN, M. D., LL. D., and J. WILLIAM WHITE, M. D., Ph. D. Profusely Illustrated. Philadelphia. W. B. Saunders. 1892. Royal 8vo. Pages 1209—xx. (Sold by subscription only. Cloth, \$7; Sheep, \$8; Half Russia, \$9).

This magnificent work has thirteen authors, as follows: Drs. Charles H. Burnett, Wm. W. Keen, Wm. Thompson and J. William White, of Philadelphia; Frederic S. Dennis, Lewis S. Pilcher, and Lewis A. Stinson, of New York city; Roswell Park, of Buffalo, N. Y.; J. Collins Warren, of Boston; Francis J. Shepherd, of Montreal; Phineas S. Conner, of Cincinnati; Chas. B. Nancrede, of Ann Arbor, and Nicholas Senn, of Chicago. None are from the South nor from west of the Mississippi. As the proof sheets of the entire book were submitted to all of the authors for mutual criticism and revision, this work therefore may be said to express the consensus of opinion of all of them upon important points, although, of course, many minor differences necessarily exist, which are recognized in the text. The illustrations consist of thirty-seven full page plates—many of them with several figures, and some of them colored—and in addition 473 wood engravings. It must be conceded that, as a whole, this outstrips any one practical work on surgery of recent publication—so far as its adaptation to the wants of the general practitioner are concerned; and the book is cheap at the prices named above. The scope of the work is to consider every condition calling for surgical care and treatment, and the thoroughness of the undertaking is indicated measurably by the fact that the double-column index alone covers thirty-three closely printed pages. Each author writes with practical conciseness, so that scarcely more than a short paragraph is given to each such sub-

division of a chapter, as the description of the disease, the diagnosis, the medical treatment, and the operation; and yet there is sufficient clearness of style to leave no reader in doubt as to the description of the disease, and as to how each step is to be followed in operating, etc. Throughout especial prominence has been given to surgical bacteriology, and to the most recent methods of treatment, particularly in relation to asepsis and antiseptis. All the newer methods in these departments in which such notable progress has, of late, been made, as in brain, spinal, abdominal, and pelvic surgery, etc., are given in detail.

The Medical and Dental Register-Directory and Intelligencer of Pennsylvania, New Jersey, and Delaware (1891 edition). Pp. 424. Price, by mail, \$1.25. George Keil, Publisher, 306 Chestnut street, Philadelphia.

¶ This book contains a complete list of the National and State Medical and Dental Associations, with their officers and dates of meeting, medical and dental colleges of the United States, and other constantly needed material, medical and dental laws, hospital, homes, etc.; also the list of medical and dental practitioners, with their school and year of graduation, postoffice addresses, and office hours. The work has been carefully compiled. It is well printed on good paper, nicely bound, and its appearance carries with it irrefutable evidence that it is of that class of publications which immediately take popular hold in the special fields for which they are designed. The error as to the place of meeting of the recent session of the Medical Society of Virginia is due to the fact that it was changed to Alleghany Springs after the burning of Luray Inn.

Annual Message of Benjamin J. Baldwin, M. D., President of the Medical Association of the State of Alabama, Montgomery, April 12, 1892. 8vo Pp. 35.

This handsomely-issued Address contains statistical tables of the entire number of physicians in each county, members and non-members of the Medical Association of the State of Alabama; number examined and rejected by the County and State Examining Boards; number of graduates of each College passed and rejected, etc. In this connection, we call special attention to the letter from Dr. Baldwin in this issue correcting some percentages calculated by us some months ago as to the rejected by the Virginia and Alabama *State* Examining Boards.

Geographical Pathology; an Inquiry into the Geographical Distribution of Infective and Climatic Diseases. By ANDREW DAVIDSON, M. D., F. R. C. P., Ed. Late Visiting and Superintending Surgeon. Civil Hospital, and Professor of Chemistry, Royal College, Mauritius. In Two Volumes. New York. D Appleton & Co. 1892. 8vo. Pp. 1005, both volumes. Cloth. Price, \$7.50. (For sale by West, Johnston & Co., Richmond).

This is one of the most interesting works that we have examined for a long time. The information it imparts is valuable alike to the medical student and practitioner, the sanitarian and the statesman. Under the term infective diseases, named in the title, the author includes miasmatic diseases, as malaria; miasmatic contagious diseases, as cholera; and contagious diseases proper, as scarlet fever. Among climatic diseases he includes croup, pneumonia, and rheumatism. Vol. I, refers to the distribution of the diseases of Europe, Northern and Western Asia, India, Ceylon, and Burma. Vol. II, considers such distribution in South Eastern Asia, Indian Archipelago, Australia and Polynesia, Africa, and America. It is the subdivision under the last heading referring to the United States that specially interested us; but want of space forbids any attempt at an analysis of the facts compiled by the author from official reports, etc. The book, as a whole, while filled with figures and percentages, etc., is relieved of dullness in reading by the interest given the sections by the deduction of conclusions, each of which engages profitable attention.

Temperament, Disease, and Health. By FRENCH ENSOR CHADWICK, Commander U. S. N. G. P. Putnam's Sons, New York. 1892. 12mo. Pp. 85. Cloth. Price, 75 cents. (For sale by West, Johnston & Co., Richmond).

This little book—read in an hour or so—grows more and more interesting as we read. As the author states it, the purpose of the book is to put forward the ideas that “there is associated with temperament a specific rate of change;” and “that the failure to keep up that rate, or in other words, a failure to have elimination keep pace with accession of material, is the primal cause of disease.” Incidentally the author remarks as the result of his observation that gray eyes mark a temperament which enable the party to go without food for a long time and to sleep at will. We are sorry we cannot yield to the temptation to give more space to a notice of this little book.

Book of the Physician Himself, and Things that Concern his Reputation and Success. By W. D. CATHELL, M. D. New Tenth Edition (Author's Last Revision). Thoroughly Revised, Enlarged and Rewritten. Large 8vo. 348 pages. Extra Cloth. Philadelphia: The F. A. Davis Co., Publishers. 1892. Price, post-paid, \$2 net.

The wonderful popularity of this book, so as to call for ten rapidly-successive editions, encourages the hope that its lessons are being read by the rising generation of doctors. The author has simply attempted to make a full commentary upon the Code of Ethics of the Profession, which he accepts as embodying the great principles of right, justice, and equity. Some specific "decisions," as it were, of the author as to the Code are at least debatable; and yet, as a whole, this book contains so much of good advice that we wish all doctors would read it studiously, and follow the leading *principles* laid down in its pages. The little chaff to be blown away will not materially affect the weight of good grain.

A Text-Book of the Principles and Practice of Medicine For the Use of Students and Practitioners By HENRY M. LYMAN, M. D., Professor of the Principles and Practice of Medicine in Rush Medical College. Chicago. In one very handsome octavo volume of 926 pages, with 170 illustrations. Cloth, \$4.75; Leather, \$5.76. Philadelphia: Lea Brothers & Co. 1892.

Prof. Lyman's valued experience, here reduced to text-book form, is very serviceable, both to College student and physician. To economize space, that he may have more room to devote to advances in the practice of medicine, historical accounts and doubtful and debatable suggestions are omitted. While his therapeutics, following diagnostic descriptions—true to life—include reference to those means which practice has best confirmed, yet, perhaps, for the beginner, at least, it would have been helpful had he not practiced brevity of statement, with reference to certain conditions, to quite so great a degree. For instance, with reference to vertigo, catalepsy, etc., it would have been better had the author given something more of specific advice than simply to say, remove the cause. The searcher for the hidden in any vast field of science often derives assistance in finding the goal by some word of advice from him who has gone before to the effect that that which is sought is best found by following a given path.

Epitome of Mental Diseases, with the Present Methods of Certification of the Insane, and the Existing Regulations as to Single Patients, for Practitioners and Students. By JAS. SHAW, M. D., Qu Univ., Irel., Master of Surgery; formerly Medical Superintendent, and Co-Licentee, Haydock Lodge Asylum, etc. New York: E. B. Treat. 1892. Small 8vo. Pp. 345 Morocco. Cloth. \$2.75.

It requires a few moments of examination to get the proper idea of the intention and arrangement of this book; but then they become plain, and the plan seems very serviceable for practitioners and students. Its semi-dictionary arrangement greatly assists ready reference. It forms a most excellent introduction to the more comprehensive works on insanity. Specially useful to the student and practitioner who has to learn the meaning of symptoms, etc., is the "Index of symptoms, with the mental conditions in which they appear." The chapters on "Index of Mental diseases, with their symptoms, etc.," on diagnosis, etc., but especially the one on "Therapeutics and Hygiene," are very excellent and very valuable for the novice in mental disease studies. While most of the work is compiled from the teachings of standard authors, yet Dr. Shaw has stamped his own individuality as a specialist upon this book, which is worth much more to the *general* practitioner than the price named.

Hand-Book of Hygiene and Sanitary Science. By GEORGE WILSON, M. A., M. D., F. R. S., Edin., D. P. H., Camb., etc. *Seventh Edition.* Philadelphia: P. Blakiston, Son & Co. 1892. Demi 8vo. Pp. 751. Cloth. \$3.25.

This book is a practical work of reference for medical practitioners generally, a guide to sanitary officials, a textbook for medical students and those preparing for public health diplomas, and a book for adoption by the general reader who may be interested in sanitary and hygienic matters. It is a great misfortune in city governments that so generally are the parties composing committees on health, etc., ignorant of the rudimentary principles of sanitation. Even the doctors, whose evidence is sometimes solicited by such committees, to decide questions of healthfulness of water supply, etc., would become more useful citizens and serviceable advisers were they to read such a standard work as this one. This seventh edition is practically a rewritten work, and is over 200 pages larger than the sixth edition—although every effort at safe condensation has been made. This is a good book, and should be very generally read.

Principles and Practice of Bandaging. By GWILYM G. DAVIS, M. D., Assistant Demonstrator of Surgery, University of Pennsylvania etc. 1891. George S Davis, Detroit, Mich. Large 8vo. Pp. 61. Twenty-three full page Plates of 127 Figures. Price, \$3. (From publishers).

This is the most thorough, complete, and useful book on bandaging that we know of. Many of the designs are original with the author, while all of the approved plans or methods of other surgeons are described in detail—by text as well as drawings. No practitioner should be without this monograph, as it will even give to the experienced surgeon many valuable hints, while by the young doctor it should be specially adopted for a guide-book in order that he may practice the too much neglected art of bandaging. The price of the book is so much above the usual price of books of like size simply because of the profusion of the illustrations in the plates.

Editorial.

Medical Society of Virginia.

The Medical Society of Virginia is under special obligation to Capt. C. A. Colhoun for his constant courtesies during its Session at Alleghany Springs, Va., September 13-15, concluding with a banquet tendered by him as Manager of this most popular Summer health resort.

Our necessarily curtailed report of the proceedings in this issue will show that the Session was, in all respects, a most excellent one. The distinguished visitors in attendance added largely to the profit of the Session by the excellence of their papers, and by their participation in the discussion of other papers presented.

The "Dr. Hunter McGuire Prize," of One Hundred Dollars, for the best of the worthy essays presented on *Tetanus*, was awarded by the Committee on Examinations, after an ample opportunity to examine into the merits of those presented. The successful essay by Dr. Chas. M. Blackford, Jr., is published in full in this issue.

We are pleased to announce that *two prizes of one hundred dollars each* will be awarded during the Annual Session of 1893, at Charlottesville, Va.—during October—if meritorious essays are presented. Ex-President Dr. Hunter McGuire, of Richmond, Va., will award a prize of \$100 for the

best essay on "*Obstructions to the Function of Micturition, and the Results*"—open to any member of either of the three State Medical Societies of West Virginia, Virginia, or North Carolina. Honorary Fellow, Dr. Joseph Price, of Philadelphia, Pa., offers a prize of \$100 to the *Fellow of the Medical Society of Virginia* who may present the best worthy essay on the "*History of Surgery and Surgeons of Virginia*"—his native State. All essays offered in competition must be in the hands of the Secretary of the Medical Society of Virginia (Dr. Landon B. Edwards, Richmond, Va.,) by September 20th, 1893. A motto or a *nom de plume* only must be signed on the title page (stating whether for Dr. McGuire's or Dr. Price's Prize) of each *type-written* essay sent in, with a sealed envelope attached, with the full name and postoffice address of the author enclosed. All essays will be given over to Committees on Examination of Prize Essays—said two Committees to be duly appointed by the President of the Society. All essays offered in competition are to be the property of the Medical Society of Virginia. The successful Essays are to be published in the *Transactions of the Medical Society of Virginia* for 1893, and in such regular medical journals as will pay for transcripts of the manuscripts. We would suggest the use of the Remington Type-Writer as the standard, because some type-writers do work so badly as to make very ugly manuscripts(?) We make the above full announcements in advance of the issue of the *Transactions* of 1892, in order that parties who propose writing for either or both Prizes may get an early start at their work.

The President-elect, Dr. Herbert M. Nash, of Norfolk, Va., has already begun earnest work to make the session of 1893 the most memorable of any of the meetings of the Society. It is sincerely to be hoped that his zeal will find hearty response from each Fellow of the Society, and that the membership be thereby increased so as to include all the worthy doctors of the State. He has just mailed a circular letter to each Fellow of the Society, from each of which it is hoped prompt replies will come.

The exact date in October, 1893, of convening the Twenty-fourth Annual Session in Charlottesville, Va., will be duly announced through the journals and by circulars.

Pharmaceutical and Surgical Exhibits, etc., Alleghany Springs—

An always attractive feature of the State Society's Sessions—consisted in the well-arranged displays of pharmacists and surgical instruments. The E. A. Yarnall Company, and

Messrs. Chas. Lentz and Sons, of Philadelphia, and Messrs. Bartlett, Garvens & Co., of Richmond, Va., each had fine displays of instruments. Mr. Yarnall greatly regretted the failure of the arrival of the recently-issued Catalogues of his house, so as to distribute them among the doctors, but which can be got by addressing them postal requests. Mr. Wm. Lentz was assisted by Mr. James C. Terman in the exhibition of his instruments, microscopes, etc. They exhibited specimens of cholera bacilli, which were examined by the doctors under a magnifying power of 1000 diameters. Mr. Garvens, of Richmond, pleased his many patrons in this State by his varied assortment of useful instruments made by the best houses in this and foreign countries. Mr. Winchester had an attractive display of the fine chemicals and pharmaceutical products of Messrs. Sharp & Dohme, of Baltimore—one of the most reliable houses of this country. Mr. W. G. Burgess represented the Analgia Chemical Company, of Manchester, Va., and also Messrs. Snellings & Burgess, of the same place, who are rapidly introducing their new and useful preparation—"Compound Tincture of the Four Chlorides." Dr. Pollok, of the New York Pharmaceutical Company, of Bedford Springs, Mass., distributed numerous samples of the well-known and popular "Hayden's Viburnum Compound." Mr. Hancock had special quarters in which he entertained friends of Messrs. Parke, Davis & Co., of Detroit—perhaps the largest manufacturing druggists of the world.

Dr. Hunter McGuire

Returned (September 29th) from his trip of two month's in Europe, much refreshed and looking well. Although he sought no recognition abroad as President of the American Medical Association, he was everywhere cordially welcomed by the profession in the several countries he visited. His hospital (St. Luke's), in this city, was filled by patients from all sections awaiting his return.

Officers Elect, etc., of American Association of Obstetricians, and Gynecologist.

During the very successful meeting in St. Louis, September 20th to 22nd, Dr. S. M. McMurtry, of Louisville, Ky., was elected President; Dr. Wm. Warren Potter, Buffalo, N. Y., Secretary; Dr. Chas. A. L. Reed, of Cincinnati, O., Chairman Executive Committee. Next meeting will be in Detroit, Mich., June 1-3, 1893.

Fatal Poisoning by Colored Hose.

It is unfortunate that laws cannot be made sufficiently protective, or else executed so as to prohibit the sale of poisonous clothing to non-suspicious customers. The *Sanitary Era*, it seems, has been pointing out the dangers of recently introduced colored hose, as now worn by men and women in accordance with the demands of fashion, and has been collecting cases in proof of their dangers to life and health. This "progressive health journal—not for sanitarians only, but for citizens, mothers, nurses, invalids—everybody," in its issue for September, 1892, adds the following "to the numerous poisonings from colored hose, heretofore reported:" "Schenectady, N. Y., Sept. 2.—Ivan Kamitz, aged 31, died here yesterday. His death resulted from blood poisoning, caused by wearing colored hose on a foot which had blistered. In the middle of June, the Rev. Robert Doiz, pastor of the Reformed Church of Scotia, a suburb of this city, died from the same cause." If the histories of many cases of deaths from poisonous agents not recognized were properly traced, it is probable that many would be found as due to the wearing of colored hose or clothes—colored by poisonous dyes.

Southern Medical and Gynæcological Association.

By order of the Council, the annual meeting of the Association has been postponed from the 8th, 9th, and 10th, until the 15th, 16th, and 17th of November. It was thought wise to change the time of the meeting from the fact that the 8th of November is the date of the Presidential election. The Secretary, Dr. W. E. B. Davis, of Birmingham, Ala., writes that everything points to a successful session.

Messrs. Renz & Henry's Advertisement

In this number (between advertisement pages 50 and 51), is specially attractive, and is a fine specimen of press work. Their preparation of Three Chlorides is a good alterative tonic, and Prof. Lydston, in his recent valuable work, did not speak of it too highly in so specially commending it as he did.

The Cholera Panic in New York City

Has abated, only eight fatal cases of the disease having occurred in the city up to September 28th. Up to September 24th, in *Hamburg*, the total number of cases was 17,157, with 7,339 deaths.

The Holt System of Maritime Sanitation,

As now improved and practiced so successfully in New Orleans for the past eight years, should be studied by the quarantine authorities of New York and other ports that may seem threatened by the epidemic of cholera. It is evident that the system now or recently adopted for the New York harbor is neither sufficient (as shown by the fact that cases of cholera have already crept into that city), nor is it satisfactory to the wishes of the people throughout the nation (as developed by the cries for the exhibition of humanity from the public press). The trouble is, we fear, that the Holt System originated and has been perfected in the lower Mississippi section; so that no one seems disposed to look in that direction for a great discovery or for the perfection of a great system. The "Holt System" is working with all the semblances of perfection about New Orleans, and is known to many sanitary authorities. As the *New Orleans Medical and Surgical Journal* for September, 1892, puts it: "If a fleet or a train of such movable disinfecting structures could be collected at New York, the work of the health officer would be lightened, the wheels of commerce would not be blocked, and, what is of more importance, the work of disinfecting would really be done, and no dangerous material allowed to bring in the pest."

The Virginia Pharmaceutical Association

Will hold its Eleventh Annual Meeting in *Petersburg, Va.*, October 11th, 12th, and 13th, 1892—unavoidable circumstances having made it necessary to change the place from Fredericksburg. It promises to be a delightful and profitable session. Mr. M. E. Church, President; Mr. T. Roberts Baker, Richmond, Va., Corresponding Secretary; Mr. E. R. Beckwith, Petersburg, Va., Chairman Committee of Arrangements.

George Foy, F. R. C. S., of Dublin,

Who has shown such admiration for the eminent professional men of the Southern States as to dedicate his classical work on *Anæsthetics* to Dr. Hunter McGuire, and through his connections with English medical journals has done so much to extend the renown of able Southern practitioners throughout English speaking Europe, is on a pleasure visit to this country. As this number goes to press, he is the guest of Dr. McGuire, and we hope his stay of a few weeks in our city and section will afford him as much pleasure as his visit gives us.

Drs. Charles M. Shields and L. C. Boshier

Have returned from their vacation spent mostly in the important medical centres in Europe, where they visited hospitals, attended clinics, and were the recipients of most courteous attentions from the profession. The letter from Dr. Shields in our September number has been most highly appreciated.* Although his practice is limited to diseases of the eye, ear, and throat, his letter will show that he keeps well up with advances in general practice—thus better qualifying himself for his specialty, in which he is so popular.

E. A. Yarnall Co.'s Catalogue for 1892.

This new and complete catalogue of surgical instruments recently issued by these Philadelphia manufacturers, etc., shows that great care has been exercised in its compilation. Its especially desirable features are its compactness, in addition to the numerous illustrations, and the high grade and style of the printing. This is the first complete catalogue issued by this house, and deserves the consideration of the profession. The book contains 345 pages, with about 2,200 illustrations, and has a semi-flexible cloth binding.

The objectionable feature of the past of discounts has been eliminated, and the prices are figured down, net, which the physician greatly appreciates. To form a true conception of this book it will be wise to send for one, and give it a personal examination. The fine style of the catalogue is in keeping with the high grade of goods manufactured by this firm.

Index of Diseases and Remedies—(Brunton.)

Messrs. Parke, Davis & Co., of Detroit, Mich., announce the issue of an *Index of Diseases and Remedies* of 264 pages, prepared for them by T. Lauder Brunton, M. D., D. Sc., F. R. S., of London, Eng., with a *supplement* giving preparations, doses, etc., of the remedies mentioned. Ordinarily the price of such a book would be from \$1.50 to \$2; but Messrs. Parke, Davis & Co. will mail a copy to any physician who will remit (by postal note, or order, or stamps) 50 cents within ten days from receipt of the "Announcement," which they will send on application. The sample leaves received show it to be a most useful book for ready reference and suggestion as to what to do. Its cheapness will leave no excuse for any one to be without a copy.

Prize Essays—Action of Alcohol and its Value in Disease.

The American Medical Temperance Association, through the kindness of J. H. Kellogg, M. D., of Battle Creek, Mich., offers the following prizes: (1st.) One hundred dollars for the best essay "*On the Physical Action of Alcohol, Based on Original Research and Experiment.*" (2nd.) One hundred dollars for the best essay "*On the Non-Alcoholic Treatment of Disease.*" Essays must be sent to the Secretary of the Committee, Dr. T. D. Crothers, Hartford, Conn., on or before May 1st, 1893. They should be type-written, with the authors' names in sealed envelopes, with distinguishing mottoes. The committee will report at the annual meeting at Milwaukee, Wis., June, 1893, and the successful essays read. All essays are to be scientific, without restrictions as to length, and limited to physicians of this country, and are to be the property of the Association.

The Electrical Review of New York, N. Y.,

Has added a department devoted to the various applications of electricity in medicine and surgery, which department is under the direction of Dr. J. Mount Bleyer. The inclusion of such a department in a special journal so ably conducted, with an editor for the department so favorably known in his specialty, ought to be sufficient guarantee of its value to the profession. Price of *Review*, \$3 per annum.

The Sheltering Arms Hospital.

This institution, founded about four years ago, has been, during this time, in very successful operation. It has rendered much good to all classes of patients, not only in this city, but throughout the State. It is governed by a Board of Managers of some of our most prominent ladies. All physicians are entitled to practice in the institution. The terms for board, including nursing, etc., are very reasonable. Dr. M. D. Hoge, Jr., has been connected with the Hospital from its foundation, and will be glad to correspond with doctors from a distance who desire to place their patients in the city.

Annals of Ophthalmology and Otology.

This quarterly journal has been removed from Kansas City to St. Louis, Mo.—Dr. James P. Parker, P. O. Box 405, continuing as Editor. Price, \$2 a year. This is an excellent special journal for the *general practitioner*, begun January, 1892.

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RICHMOND, NOVEMBER, 1892.

Original Communications.

ART. I.—Sexual Hypochondriasis and Perversion of the Genesic Instinct.*

By IRVING C. ROSSE, A. M., M. D., F. R. G. S., of Washington, D. C.

PROFESSOR OF NERVOUS DISEASES, GEORGETOWN UNIVERSITY—MEDICAL DEPARTMENT, ETC.

In the remarks that are to follow an attempt will be made to avoid the superannuated subjects of spermatorrhœa and venereal excesses now relegated to quacks and the advertisements of religious newspapers, and I shall not touch upon any teratological condition of the genital organs, nor upon the high degrees of sexual excitement so often found among the insane.

The manœuvres of either sex to produce the venereal orgasm, independently of the conditions of normal coitus, and known comprehensively as genital abuse, merit the scientific study of the psychiatrist and neurologist, owing to the prevalence and spread of sexual crime, and the fact that legal medicine calls for clearer knowledge upon this point.

Among the long series of manifestations alleged to follow such abuse, none is more frequently observed than that of

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psychic depression. Numerous cases of melancholia, hypochondriasis, and sexual neurasthenia, attributable to artificial provocation of the genital erethism, are met with among the sexes by the general practitioner both in town and country, and of all hypochondriacs, those who refer their suffering to the genital organs are perhaps the most miserable.

At the outset, it may as well be said, that in no other class of affections is a diagnosis by exclusion more to be relied upon; for the affection in question may be dependent upon some other cause entirely different, as difficult dentition, worms, too rapid growth, or to similar phenomena that may attend the slow and insidious course of chronic affections of the viscera. So common also, in this regard, is the confusion of cause and effect, that many unthinking persons attribute nearly all cases of insanity to genital abuse, just as I have often heard an old attendant do when showing visitors about the insane wards of Bellevue Hospital.

This matter of mistaking symptoms for causes, especially in misapprehending the erotic manifestations of insanity, has, however, been so well put by Sir James Paget in his admirable essay on sexual hypochondriasis that further attempt at elucidation on my part would be to go over ground already well trodden; and what I could say relatively to the ætiology, would be in the way of concurrent testimony that would only strengthen the doubt as to whether excesses of the sexual system can altogether originate the affection. I shall, therefore, limit myself to the brief mention of a few particulars that have come under professional observation, as by so doing I observe the Newtonian injunction of example rather than precept, and this too in the face of a petulant remark that I overheard from an older member of the profession at a late meeting, to the effect that he would as lief have a man spit in his face as to begin reading cases. I am quite safe in the assertion that none of us, in either this or the next generation, is likely to have the pleasure of contributing to the monument that shall commemorate what he has done to promote medical science.

Without, however, going into details of the old *morbus Mirachiali*, I may refer to several concrete illustrations of pathological states where the patients themselves believed their moral troubles and intellectual disorder to be the consequence of onanistic habits. Among many of the kind, I recall five typical cases in young unmarried men, all of whom were impotent and neurasthenic, and each confessed to the long-continued habit of procuring *extra vas* ejaculations. In one case the salacious fury often led to the erection being provoked as much as five times before midnight. The mental symptoms in these cases rather touched the border line; one of them had a homicidal, two a suicidal impulse, or, more correctly speaking, the fear of an impulse; two had agoraphobic symptoms, and one has since got married. Symptoms of this kind are not limited to single men. Two syphilophobes that I have lately treated are married men, one of whom is the saddest example of this form of hypochondria that I have ever seen outside of an asylum. Another hypochondriac, an intelligent lawyer from one of the Western States, for a number of years had abusive genital relations with his wife, which had reduced him to the moral and physical condition best described by the clinical picture so often seen in quack advertisements. This patient is the only one of the class in which I was able to detect spermatozooids in the urine.

If such crimes of sexuality were confined to men the lesbian habits of the opposite sex would furnish no material for comment. In the cases of mental depression in unmarried women that I have had under observation, eroticism was at least one of the syndromata. One of them, called to my attention by Dr. Jos. Taber Johnson, of Washington, was a comely young woman who suffered from nymphomania; practiced genital abuse to excess, and declared that several persons, among them her clergyman, had cohabited with her. The nervosism in this case was exaggerated to such an extent that the mere sight of a man, even the attending physician, suggested a repetition of the act to provoke the venereal spasm. So persistent was the habit, that

on tying her hands the act was accomplished with her heel. To prevent this the feet were secured, but she succeeded in bringing about an orgasm by pressing the thighs together in such a way as to excite the clitoris. Operative interference was suggested in this case, which ultimately developed into erotomania, and the patient died at a Retreat near Philadelphia.

Perhaps the most that can be said of such cases as the foregoing is that the majority of them will yield to judicious treatment. As a matter of fact, much of the so-called sexual hypochondriasis is in no way attributable to sexual criminality. But the uncleanness forbidden by God and despised by man, calls at the present time for more earnest attention from the physician, since it concerns not only personal and public hygiene, but forensic medicine, and the consequent welfare of family and posterity. The moral point of view does not concern us as physicians, but bodily and intellectual welfare coming pre-eminently within our province, the inference is obvious even to the lay mind.

In a late sermon of the Archbishop of Canterbury before the Medical Association at Birmingham, the medical profession were reproached with a want of courage and candor in dealing with the whole question of "purity" so-called. I have no doubt we merit the censure, as many of our members, actuated by virginal modesty and false delicacy, shrink from exposing the turpitude that they constantly meet with. Medical men are clearly the only persons qualified to give trustworthy information in regard to sexual matters, and there is no other subject that comes within the daily range of the physician upon which people are more anxious to be correctly informed. As a factor in social evolution, the question of the reproductive function is, therefore, of burning importance, both in its normal and abnormal manifestation.

If crimes of sexuality were confined to the human species, we should not have an opportunity to study the biological beginnings of crime as observed in curious instances of criminality in animals, which raises doubts as to

whether these inversions of the genesic instinct are with them unnatural phenomena, or rather an outward manifestation of an imperious functional want. Without exposing the details of the analogy upon which is founded the presumption, we are warranted in saying that as many of the lower beings in the zoölogical scale show virtues having analogy to those of man, we must expect to find parallel vices. It is an error to suppose that aberration of the genesic instinct is confined to our species, time, or race. Evidence shows that unnatural crime exists under all latitudes. It extends from the prehistoric time of the troglodytes up to Hippocrates, who stigmatizes it in his oath, and from his time to the present. I have observed common instances of sexual perversion in dogs and turkeys. A short time since, at the Washington races, a celebrated stallion was the favorite on whom the largest bets were made. A friend of mine, having ascertained from the groom the day before the race that the horse had procured an ejaculation by flapping his penis against the abdomen, accordingly risked his pile on another horse, who, by the way, came in ahead. Only a few days ago, to escape a shower, I took refuge in the elephant house in the Washington zoölogical gardens, where are confined two male elephants, "Dunk" and "Gold Dust." To my astonishment they entwined their probosces together in a caressing way; each had simultaneous erection of the penis, and the act was finished by one animal opening and allowing the other to tickle the roof of his mouth with his proboscis after the manner of the *oscula more Columbino*, mentioned, by the way, in some of the old theological writings, and prohibited by the rules of at least one Christian denomination.

It would be easy to cite other instances like these, which may be suggestive from a Malthusian point of view, as we know that the female spider often kills and eats the amorous male; female birds will combine to drive away the male, and other analogous facts have been noticed in various species. Whatever we may say of animals in this respect, the facts of zoölogy tend to support rather than antagonize our moral

code. It is rather in the matter of *bestiality* that sodomitical intercourse with animals requires mention.

This high treason against humanity, mentioned in the Bible from Moses to St. Paul, has perhaps existed from all time, as numerous citations from both sacred and profane literature go to show. In antiquity there were the sacred Ram of Egypt; the serpents kept in the temple of *Æsculapius*, and the donkeys mentioned by Juvenal (*Sat.* VI, 332, 333), so much sought after by women who recognized the salacity of an animal that promised the most voluptuousness to hysterical insatiety. A quotation from Plutarch would seem to show that animal and individual relations of a culpable nature were widespread in the Latin Empire; and from histories of the Middle Age we glean that the vice was more dominant than in antiquity. Soldiers in those days satisfied their passion on anything—mules, dogs, sheep, or fowls, and on march among the camp followers, were richly caparsioned goats kept for the use of officers and their friends.

It is not, therefore, astonishing that the frequency of the evil should have attracted the attention of theologians. In the fifteenth and sixteenth centuries a favorite theme for sermons was sodomy and bestiality, as one will see who cares to run through the sermons of Jean D'Aquilae, Savonarola, Cherubino di Spoleta, and others, not to mention the monstrous details to be found in the work "*De Matrimonio*," by Father Sanchez. Nor is it surprising that the question of unnatural fornication came up between confessor and penitent; that the matter should be mentioned in the *Regulæ Communes* (XXXIV) of the Jesuits, and that penal sanction should be attached to bestial sin committed by a member of the clergy. "Item episcopus cum quadrupede peccans decem annos paeniteat, presbyter quinque, diaconus tres, clericus duos."

It is very easy to hurl an anathema at another century, and to say that such an epoch carries off the palm for corruption. In our day this crime is happily less prevalent, though far from rare in the large cities, although Dr. Pouil-

let, in France, says that there are but few villages where the degradation does not exist among the inhabitants, and that cases of this kind are far from rare in the courts of justice. Those of us who have been students abroad and have done the slums of large cities, can recall a performance between a woman and a donkey which was to be witnessed on paying a small sum. A similar show, in which a large Newfoundland dog and a prostitute were the actors, could be seen some years ago in San Francisco. On questioning the passive agent regarding this form of salaciousness, she averred that if a woman once copulated with a dog she would ever thereafter prefer this animal to a man. The much maligned Chinaman, who has the reputation of having reached the highest refinement in lubricity, is said to have such a partiality for ducks, that Europeans in China will not eat a duck on this account. As a race problem, however, I don't think that what a writer calls "the fetishism of love," is more observable in the Mongolian than in the Caucasian. My observation of such matters in the Chinese quarter of San Francisco leads to the belief that the French prostitutes of *Dupont* street can give them points any time. Doubtless, from an ethnic point of view, there is a difference in the erotic constitution, and an Anglo-Saxon may not be capable of so much salaciousness as a Turk, an Arab, or a Negro.

I know the case of a Negro boy and a cow which was well known in a suburb of Washington, and came under the observation of a medical practitioner and others. On the other hand, just a year ago, a young white unmarried woman in the Capitol city, was surprised *in flagrante delicto* with a large English mastiff, who in his endeavors to get loose caused an injury of such a nature that the woman died from hæmorrhage in about an hour. Besides the medical observance of this case, it was a matter of police knowledge, and elicited the comment that the men in the neighborhood could not be very enterprising.

Among other genital idiosyncrasies of negroes coming to the knowledge of the Washington police, is the old Scythian

malady spoken of by Hippocrates and Herodotus, and observed by contemporary travelers in the Caucasus. A band of negro men, with all the androgynous characteristics of the malady, was some time since raided by the police. The same race a few years ago had one or more gangs that practiced a kind of phallic worship. An informant, who has made a study of skatological rites among lower races, described to me how a big buck, with turgescient penis, decorated with gaily colored ribbons, stood and allowed his comrades to caress and even osculate the member. Performances of the same nature are known to the rites of vaudouism. In New Orleans a few years ago a vadoux society was suddenly surprised by the police during these ceremonies. Two of the naked persons taking part in the orgy were white women. The incident lead to a famous trial, which resulted in acquittal.

It is rather doubtful whether observations such as these go to support the statement that in the progress of humanity lubricity and civilization march hand in hand, since travelers have noticed that many facts to the contrary exist among primitive people, especially our North American Indians. Having spent two seasons among the Eskimo of Bering Strait, I have reason to believe, from circumstances not necessary to detail, that inversions of the genesic instinct exist among these people just as they do among our common humanity in other latitudes. The sodomitical habit, to which I refer, known as *pederasty*, is one of the oldest infamies of the Adamic race. Biblical and classical writings show the spread of a vice that could not be arrested by the voice of the apostle, the edicts of magistrates, nor the penalties attached thereto by the Casuists. The historical development of this subject would form a long chapter of curious but repugnant reading. The worship of Baal was only a masculine prostitution, which is also mentioned in the Koran, and history informs us that Phillip himself was soiled by this infamy; that Cæsar was "the husband of all women and the wife of all men," and that Nero, Alcibiades, and Adrian were addicted to this passion.

Even Horace, in the latter part of his career, had an attachment of the kind, and one of the poems of Vergil, which so many of us read as school-boys, is full of pederastic allusions. From historical citations we could easily sketch the spread of pederastic prostitution in other epochs, especially about the fifteenth century, when religious mysticism and genesic insanity assumed monstrous proportions, or we might refer to the geographical distribution, which shows a greater prevalence in Asiatic countries. But it is with the present that I wish to deal.

Rectal coitus between men and women is so prevalent in Paris, says Dr. Pouillet, that out of every hundred prostitutes admitted to the Lourcine, sixty at least have undergone rectal defloration.

The concert of the two prostitutions, feminine and pederastic, in many of the foreign cities, is a fact known to many. Only a short time ago a notorious place of the kind in New York, known as the "Slide," was broken up by the authorities, mainly through the publicity given to it by the *New York Herald*. From several prosecuting attorneys of the larger cities, I learn the details of many cases, and there has come to my knowledge an instance of a religious hypocrite, a man living in a small village, who ruined a number of boys, three of whom died, and one of whom committed suicide. A similar case, known to the police of Washington, is that of a well-connected man with a very pallid complexion, who enticed messenger boys to an hotel, and after getting them under the influence of drink, accomplished his fell purpose.

A friend in the Department of Justice tells me of the trial in Philadelphia of a noted pederast, who communicated syphilis to a dozen or more of his victims. Some years ago I saw at San Francisco on board the celebrated Arctic cruiser *Corwin*, a case of syphilitic periostitis in a ward-room boy, who had been shipped by the executive officer without medical inspection. Being too young to have acquired venereal disease in the ordinary way, examination revealed the existence of a horrible mass of syphilitic sores about the

anus and nates. The boy told me that prior to his shipping on the *Corwin*, he had served on board the *U. S. Ship Alaska*, where the men had used him as a passive agent for immoral purposes.

My friend, Dr. Dickson, U. S. Navy, calls my attention to a similar case that he has just observed at the Washington Marine Barracks in an apprentice boy of fourteen.

The presence of chancres having been observed in other parts of the body, as the mammæ, the axilla, and even in the mouth, calls for the consideration of a hideous act that marks the last abjection of vice. So squeamish are some English-speaking people on this point, that they have no terms to designate the "nameless crime" that moves in the dark. Many of the Continental writers, however, make no attempt to hide the matter under a symbolic veil, and deal with it in terms as naked and unequivocal as those used by the old historians, from whom hundreds of citations might be made, and this too without incurring the reproach of pedantry. A quotation from Erasmus shows that *lesbianism* had a place in his thoughts: "Aiunt turpitudinem quae per os peragitur, fellationis opinor vel irrumationis, primum a Lesbiis authoribus fuisse profectam."

The writings of the Casuists, so profoundly versed in matters of conscience and human vice, show unequivocally the same thing, as witnessed in the questions recommended to spiritual directors, especially those of Bishop Burchard, of Worms, in the eleventh century; and some ecclesiastical writers even went so far as to express the opinion that they saw no mortal sin in the action of "virile membrum in os mulieribus immittere," or in that of "virile membrum in os accipere."

From writings of the genitalists, I might multiply references like these to a tiresome length, but, to be brief, it may be said that inversions of the genesic instinct have and do exist among all people, and that numerous cases may be collated from current medical literature, and from the archives of criminal anthropology and penal science. A contemporaneous French writer says that "the fire and sulphur

that destroyed Sodom and Gomorrah would scarcely satisfy to purify New Caledonia," and Dr. Pouillet writes of buccal coitus that *irrumation* (*a) has become so habitual (*chez nous*) among the French that there are but few young men of this generation upon whom it has not been practiced, and but few compliant women or prostitutes who refuse to fill the office of *fellatrice*. (b)

As a reflex of this state of immorality, we have only to call to mind the unclean realism of Zola and Tolstoi, and the French lesbian novels, *Mademoiselle Giraud ma Femme*, by A. Belot, and *Mademoiselle de Maupin*, by Th. Gautier, whose point of departure is tribadism. The same astounding theme pervades *Fridolin's heimliche Ehe*, by Wildebrand; *Brick und Breck oder Licht in Schatten*, by Count Emerick Stadior, and *Venus im Polz*, by Sacher-Masoch. In our own country, the surreptitious sale of such publications is carried to such an extent that agents of the Postoffice Department yearly destroy tons of pornographic literature.

That these degrading acts tend to spread more and more in the great centres of population, we have only to recall what some of us have seen in the old cities of Europe, where certain women will commit the simulacrum of the virile venereal act for a small sum of money; where infamous scandals have occupied the attention of justice and the newspapers, and have even caused the expulsion of a member of Parliament. A vice that crossed the Atlantic with Columbus, and perhaps with the austere virtues of the *Mayflower*, like other spreading things in our country, has caused club scandal and a law-suit in New York, and extending to San Francisco and far away New Zealand, like the morning drum-beat of the greatest nation, has begirdled the earth.

But let us come nearer home, and turn on the searchlight in our own city. I trust I am not indiscreet in re-

* These terms not being Englished, the following definitions are given: (a) *Irrumare*: penem in os arrigere.

(b) *Fallatrix* dicitur ea quæ vel labris vel lingua perfricandi atque exsugendi officium peni præstat.

peating a remark, overheard lately among a group of gentlemen of Latin extraction, one of whom, on averring that he could never bring himself in lesbian relation with a woman, was evidently looked upon by the others, in a pitying way, as a man whose education had been neglected.

A Washington physician, whom I see almost daily, tells me of a case of venereal disease of the buccal cavity in an old soldier whom he is treating. The patient, with unblushing effrontery, did not hesitate to say how it was contracted.

From a judge of the District Police Court, I learn that frequent delinquents of this kind have been taken by the police in the very commission of the crime, and that, owing to defective penal legislation on the subject, he is obliged to try such cases as assaults or indecent exposure. The Lieutenant in charge of my District, having called on me a few weeks ago for medical information on this point, informs me that men of this class give him far more trouble than the prostitutes. Only of late, the Chief of Police tells me that his men have made, under the very shadow of the White House, eighteen arrests in Lafayette Square alone, a place, by the way, frequented by Guiteau, in which the culprits were taken in *flagrante delicto*. Both white and black were represented among these moral hermaphrodites, but the majority of them were negroes.

Another instance that has come to my knowledge is that of a sanctimonious young man who frequented a certain religious association in order to entice victims of this singular genital abuse.

But men do not, by any means, hold a monopoly in this kind of perversion. Years ago, by way of investigation, I began a collection of quack advertisements and pornographic literature, which was soon dropped, as the result was neither elevating nor profitable. At that time, I did not believe in the existence of some of the very things I have mentioned; but having had a neurotic patient, whose conversation showed an extremely erotic turn of mind, I

learned from her some particulars as to the existence and spread of *saphism*.

I know the case of a prostitute, who, from curiosity, visited several women that make a specialty of the vice, and, on submitting herself, by way of experiment, to the lingual and oral manœuvres of the performance, had a violent hystero-cataleptic attack from which she was a long time in recovering.

Through one of my patients of the opposite sex, another case has come to my knowledge of a woman who practices the orgies of tribadism with other women after getting them under the influence of drink.

The Professor of Obstetrics in Columbia College, Dr. A. F. A. King, tells me of a case of tribadism coming under his observation, in which a young unmarried woman became pregnant through her married sister, who committed the simulacrum of the male act on her just after copulating with her husband.

I am aware that the instances herewith adduced fall short in number and detail, when compared with those reported by some French, Italian, and German writers—notably Moll, whose late work, "*Die Conträre Sexualempfindung*," Berlin, 1891, goes into the subject with Teutonic thoroughness.

Having purposely avoided citing the cases of others, I have confined myself to those coming within my personal knowledge and observation; and I take it for granted that what is true of Washington, as regards sexual matters, applies more or less to other American large cities.

Having shown that humanity is obliged to live with such moral maladies as I have attempted to portray, I fancy some critical person will remark, Why bring to the light of publicity the details of such a repugnant subject? The answer to this lies in the startling clinical facts just exposed, which show that the question of sexual perversion is one of social hygiene touching mental pathology in many points. There is, consequently, a call for a better understanding by physicians and lawyers as to specific acts, since they may be con-

sulted to pass upon the mental state and responsibility of an individual, and to determine whether a certain act is the result of an unsound mind, or merely one of a libidinous nature. Morbid love between two young women, one of whom murders the other, may be cited. Such a case was tried on the Eastern Shore of Maryland a few years ago. The recent case of Alice Mitchell is still another in point.

We fight anarchy, nihilism, and cholera. Why not take measures to prevent, stay, and root out acts that attack both general and individual health, menace physical vitality, and destroy intellectual and moral essence?

This brings up several important practical questions as to causes, prohibitory and repressive measures, and the like. It has been suggested that the subjects of genestic inversion may be victims of an anomaly analogous to that of splanchnic inversion. Whatever may be the cerebral blot or the abnormality of the genito-spinal area that brings about this physiological instability, there is, at the present time, a subtle and powerful influence in corrupt and immoral publications, indecent advertisements, and newspaper articles, printed and pictorial, which tends, by concentrating the thoughts on the lower portion of the genital tract, to bring about much sexual depravity. The erotic effect of reading publications of the kind may affect the lower lumbar reflexes in such a way as to cause great anxiety and bring about sexual hypochondriasis, not to mention the fact of their influence as wide disseminators of immorality and as teachers of crime.

The Saphic literature that is yearly vomited forth by the Continental printers has recently caused the railway book-stalls in Belgium to be closed. In English-speaking countries societies for the prevention of vice have brought many of these human vampires of the printing press to the attention of justice. Cases in point are the well-known action against Bradlaw & Besant for publishing "The Fruits of Philosophy," and the recent prosecution of Messrs. Vizetelly for publishing "Nana." Notwithstanding the "Indecent Advertisement Act," passed in England, failure to convict

is the rule in such cases. It is probable that no thoroughly effective legislation will ever be brought about, and that such indecent publications as "The Elements of Social Science," quack advertisements entitled "Health, Vigor, and Manhood," and the outrageous reports and meretricious illustrations of newspapers will continue to appear in countries where speech is free and the liberty of the press unrestricted.

The Assistant Postmaster-General, Mr. Laurie Bell, tells me that so much obscene matter comes to the Dead Letter Office that he is obliged to prohibit women clerks from opening the mail. Agents of the Depredation Bureau, and of certain societies, capture and destroy much of this stuff; but many of the methods of societies for preventing vice and bringing about prohibitory legislation, though well-meant, are both reprehensible and impracticable. Overzeal has led to false philosophy and sophistry like that of the prohibitionists, who would enact sumptuary laws that would interfere with the liberty of the subject. Drink has never destroyed a nation; but luxury and unbridled lust have, many times; and nowhere does the Bible say, "Thou shalt not drink," although it is, throughout, particularly severe on all the sinful lusts of the flesh. So imperious is the prompting of the generative instinct, that any legislation or other measure looking to its control or repression would be about as ineffectual as an attempt to change some of the great physical wonders of the North American Continent.

What, then, should be done in the treatment of cases guilty of unnatural and immoral practices? Clearly, it is a matter of prevention and judicious education, with the employment of appropriate medical and surgical measures, and such hygienic, social, and psychic rules that any intelligent physician can suggest.

At no time of life is psychic hygiene of more importance than towards the epoch of puberty, and this is best enforced by the sedulous cultivation of the function of self-control. The key-note of most cases of insanity being defective inhibition, common sense would suggest that young people

of all classes be accordingly instructed as far as possible. As an adjuvant to the accomplishment of self-restraint, nothing is better than gymnastic and athletic training. It is for this reason that I am such a strenuous advocate of the manly exercises and out-door sports, especially those that bring the play-impulse into action. Daily excessive muscular expenditure, carried to the point of lassitude, is a powerful and constant derivative to genesic irritability. It moreover strengthens the will and gives energy to resist the startling and suggestive impressions of an imagination gone astray. A verification of this fact is often found in champion athletes, many of whom are temporarily impotent. To be sure, we do not want to make Hanlons and Corbetts, or record breakers of our boys, but who would not rather have his son contract a bad heart or a hernia than to see him a sexual pervert?

In some of the schools in England, instruction and advice is given to boys regarding sexual matters. Professor Humphrey, of Cambridge, advocates instruction of this kind along with an appeal to a boy's manliness and honor; and, at the request of a majority of undergraduates, an anonymous pamphlet has been placed on the table of the Union, explaining sexual physiology and giving authoritative and rational advice. I am not aware that such matters receive attention at the large schools of our country, unless it be the Roman Catholic Colleges, where they are a part of religious supervision.

But the religious instinct so often goes astray in this respect as to impress all philosophers and all physicians with the narrow border line that separates religious exaltation and erotic perversion. Many hypochondriacs pass for religious when they are only suffering from sexual neurasthenia; and it is a fact known to physicians, that so-called religion and erotic debauchery often go together. For this reason, I am always suspicious of young women who object to round dances on moral grounds, as I know of a number of cases of the kind, who, to put it mildly, "went to church before the bell rang." Much of the New England prudish-

ness; the affected propriety of such places as Asbury Park; the late salvation performance of *De Cobain* in Brooklyn; and the colossal modesty of some New York policemen, who, in such cases, want to give written rather than verbal testimony, each and all come within the category of hypocrites that strain at a gnat yet swallow a camel. I have known this sentiment carried to such an extent in a Massachusetts small town that a shopkeeper was obliged to drape a small but innocent statuette displayed in his window.

I cannot better conclude these remarks than by advocating the teaching to youth of a virtuous and judicious carelessness about sexual matters. I am not one to take a pessimistic view of the anomalies and inversions of the sexual instinct as found among us at the present day. They are manifest disturbances of a badly-balanced nervous system, which we cannot view with serene indifference. Although we may not share the belief of a preacher, who speaks of unbridled lust as the great danger that threatens America to-day, it may be well to bear in mind the results of Roman impudicity, more cruel than the sword, according to the energetic expression of Juvenal, and that more recent admonition found in two lines of the *Deserted Village*—

“Ill fares the land to hastening ills a prey,
Where wealth accumulates and men decay.”

1701 *H Street*, N. W.

ART. II.—What Shall be Done with the Imbecile?*

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SUPERINTENDENT OF FONT HILL PRIVATE INSTITUTION FOR FEEBLE MINDED, ETC.

It is with some diffidence that I venture to offer this representative body of medical men a few thoughts grouped under the subject, “What shall be done with the imbecile?” My apology for the infliction must rest upon the plea that Virginia has provided for her insane population with a

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magnificent generosity second to no other State in the Union; yet, with over 3,000 idiots among her population, she has made as yet no provision for these neglected creatures. It rests largely with the medical profession to further any public movement which looks towards the arrest and prevention of disease, as well as piloting the patient through his illness. We are entering an era of preventive medicine, and while we may not see idiocy stamped out of our population in this generation, we are the pioneers of a movement which, if properly carried out, cannot help but establish rules for the guidance of those who are to come after us, in performing the radical surgery which *shall* extirpate the blight.

With this, then, as my apology, and with the hope that some practical knowledge of the idiot, his needs and demands may be extracted from what follows, I beg your suffrance for a few minutes in their behalf.

Time and space will not permit me to enter too deeply into the etiology of idiocy, but for the better presentation of the subject, permit me to outline a *history of the work of caring for them as developed in America during the past thirty years*.

It is certain that the peculiar form of idiocy known as cretinism was acknowledged by the ancient writers; among others, Vitruvius mentions them and their goitres, describing them as monstrosities, and regarding them, as did most of the writers up to the beginning of this century, as the results of supernatural influences.

No less a personage than Martin Luther claimed that idiots were possessed of devils, and urged, in one instance, that a particularly hideous cretin should be drowned in the Moldan, roundly denouncing as "blockheads" those who attempted to alleviate their condition. Fortunately, this ardent reformer was almost alone in his pessimistic views, and it is a matter of history that as early as the sixteenth century, the monk, del Bartolemew, collected about him a few poor cretins, and endeavored to train them to assist him in the cloister-gardens and halls. The mediæval lite-

rature of Germany and Scandinavia abounds with stories of changelings or the offspring of hobgoblins, left by these supposed beings in place of the babe which they snatched from the cradle and carried to their subterranean abodes; other nations, the Irish, for instance, held the "innocents" in reverential awe as marked by God's finger; the Hindoos recognized the condition as one that needed the utmost care and attention, lest some overt act of the weak one should cause a loss of caste.

Outside of the Koran, which expressly enjoins that if a man have a feeble-minded brother, he shall not give him his share of his inheritance, but clothe him, and feed him, and speak kindly to him, there was not a page of scientific, philanthropic, or religious literature devoted to idiocy when this century dawned, unless it was some comments upon endemic cretinism as existing in certain valleys of Switzerland and Savoy; outside a few religious establishments in Switzerland that sheltered a meagre number of cretins, no effort had been made to care for such unfortunates, and until Itard's experimental training of the so-called "savage of Aveyron," nothing had been done to ameliorate the condition, either mental or physical, of the ill-fated imbecile.

It remained for the elder Seguin, a pupil of Itard's, to develop a system of training, which remains to-day the great monument of his skill and acumen and the veda of those educators whose lifework has to deal with the idiot.

Closely associated with Seguin was Guggenbühl, the young Swiss physician, whose institution in the Abendberg, near Interlaken, became a sort of Mecca for those interested in the idiot, and from these nuclei a sympathetic wave of interest spread across the ocean to America, where, in 1848, Dr. H. B. Wilbur opened a private school at Barre, Massachusetts, and later in the same year the State Institution was opened in South Boston. New York started her great work with these unfortunates in 1851, Pennsylvania in 1853, Ohio 1857, Connecticut 1858, Kentucky 1860, Illinois 1865, Iowa 1876, Minnesota and Indiana 1879, Kansas 1881, California 1884, Nebraska 1887, New Jersey 1888. Mary-

land's State Institution was opened also in 1888, though I inaugurated the work in that State in 1886.

Besides these fifteen State institutions, there are several private institutions caring for a certain number of cases from the wealthier families, the entire number under care and training approaching 5,000.

The census of 1890 puts the total number of idiots in the United States at 95,571, an increase of 18,676 since the last census. In the State of Virginia there are 3,090 idiots, and as there is no provision whatever made in this State for their care, except as it may be their incarceration in almshouses or asylums for the insane, the harvest is here ready for the reapers. A patient study of the criminal records of the State would, no doubt, show the advantage of proper legislation for their care in a decreased number of jail *habitués*, and a corresponding decrease in costs which the State has to pay. There is no method by which the misery and injury done to other children by association with their defective brothers and sisters, or the saving of wear and tear upon the family, to say nothing of the pecuniary economy of massing them in one common family under one head and management, can be better illustrated than by the glorious history of our State institutions for the imbecile. The sum total of insane in the United States is only a few thousand in excess of the total of idiots, and the query arises, why should our legislatures halt in doing their duty by these equally unfortunate members of the body politic?

The insane, the deaf, the dumb, and the blind have received special care for several generations, yet here is a class of helpless ones, handicapped by defect, crippled by infirmities, having seeing eyes, yet see not, hearing ears, yet hear not, innocent sufferers for sins they did not commit, sitting in the shadow of a misery greater than that of other defectives, these most afflicted of the afflicted have found, until recently, all doors closed against them, save those of the jail and the poor-house.

Seguin attempted to classify the phenomena of idiocy

upon the assumption that its mental and moral features were dependent upon conditions of the nervous system, and he proposed to inquire and classify upon the underlying facts, viz: Whether that portion of the nervous system that constitutes the mode of communication between the world of relation and the individual was affected, or that deeper or more central portion whose function is to receive, to feel, to consider, to act upon the stimuli, the perceptions communicated from without; he thus makes two essential forms of idiocy—

1st. The chronic affection of the whole or a part of the central nervous masses, which he characterizes as *profound idiocy*.

2nd. A partial or total affection of the nervous apparatus, which ramifies through the tissues and presides over the life of relation, the result of which is *superficial idiocy*.

3rd. "Backward children" (*l'enfant arriere*).

This latter class seems to illustrate a condition of retarded mental development in early childhood, which may be said briefly to result from a mere functional torpidity of the nervous system.

It may be said here that, while this class of backward children is recognized to-day, I am not at all certain that many are to be found whose mental condition is that of *torpidity*; the arrest of development is either pre- or post-natal, and the result is an actual and more or less absolute deficiency. This would seem borne out by Seguin's exact definition of idiocy, which he gives as follows:

"Idiocy is a specific infirmity of the cranio-spinal axis, produced by deficiency of nutrition in utero and in *neo-nati*."

Wilbur, in signifying his belief in the propriety of Seguin's classification and definition, points out two forms of physical degeneracy, one symptom of which is more or less impairment of the mental faculties, cretinism, and that modified and more common form of the same trouble called the Mongolian or Kalmuck type of idiocy.

Griesinger defines idiocy as "a condition in which a state of mental weakness has existed from birth or from early

infancy, in which the *psychical development* has been thereby *impeded or prevented*." "Individuals in these circumstances," he says, "remain to a greater or less extent below the average in intelligence, nor can they attain to the degree of education and instruction corresponding to their age and social condition."

He then divides idiots into two general classes:

1st. The more severe cases of intellectual nullity.

2nd. The less severe cases of simple mental weakness.

Ireland proposes a classification based upon pathological conditions, making ten divisions:

1. Genetous idiocy.

2. Microcephalic idiocy.

3. Eclampsic idiocy.

4. Epileptic idiocy.

5. Hydrocephalic idiocy.

6. Paralytic idiocy.

7. Cretinism.

8. Traumatic idiocy.

9. Inflammatory idiocy.

10. Idiocy by deprivation.

Kerlin* has suggested four general groups to cover the chief varieties or grades, as follows:

1. Idiocy, $\left\{ \begin{array}{l} (a) \text{ Apathetic.} \\ (b) \text{ Excitable.} \end{array} \right.$

2. Idio-imbeciles.

3. Imbeciles, $\left\{ \begin{array}{l} (a) \text{ Lower grade.} \\ (b) \text{ Middle grade.} \\ (c) \text{ High grade.} \end{array} \right.$

4. Juvenile insanity.

I should like to have the time to go deeper into this part of my subject, to draw you pen pictures of one or other or all these grades or classifications, or, better yet, display before you the children themselves; let me suggest to you that a visit to an institution is at once the quickest and best and most entertaining manner of knowing what the imbecile really is.

* Report Standing Committee to 11th National Conference of Charities and Reforms, 1884.

"We might," says Kerlin, "consider helpless idiocy in its relation to organized society from two points:

"1st. That of the preservation of society itself from a baneful, hindering, or disturbing element, generated within itself and too often from avoidable causes.

"2nd. The right inherently existing in a defective and irresponsible member of society to protection from that body in exact ratio to his necessities."

Assuming these propositions to be true, and I think no one will deny either, we come to consider how best may the idiotic be cared for, and such as are capable rendered capable of self-support, or at least able to earn a proportion of their board and clothing.

The treatment of the idiot, and the task of developing to the utmost such abilities as are latent in him, is not confined to the therapist; pedagogic science must be invoked as well as the art of the physician; the defective one is a pupil as well as a patient and pedagogic; therapy may yet attain the rank of a separate and distinct branch of medical training.

It is not an uncommon error to assume that the idiot can be *cured*; in other words, that man can make normal what nature has made abnormal; it is perhaps a no less common assumption, even with the present knowledge of what has been done with defective children, that nothing can be done for him save to make him comfortable and keep him out of harm.

Both assumptions are incorrect, and in a certain sense do harm. Idiocy is not a disease; on the other hand, insanity is a disease. It has been said that the insane man is like one who has been rich and lost his wealth, while the idiot is like one born in poverty. Idiocy is a defect, a deficiency, and, while a disease, may be cured. Human instrumentality can never remodel nature's incomplete products and constructive failures; it can only do the best possible with the material given.

Now, having given some idea of what constitutes idiocy, what shall be done with our idiotic population?

We can safely assume, at the outset, that the day of speculation in regard to them is gone; the American institution has passed the stage of experiment. An half century of experience speaks in no hesitating voice of the only successful solution of the problem.

The institution furnishes a little world, a microcosm, with its curriculum of duties and pleasures. Herein the idiot finds company; his isolation ceases; he is no more hidden away upon the approach of visitors; he is placed in school with other children, among whom he finds congenial playmates; he is placed under the guidance of a teacher who knows how to waken all his slumbering faculties, and at the same time control his wayward disposition with a firm and dispassionate discipline.

It seems almost incredible that any thinking person or community cannot or will not appreciate the very evident fact that the distribution of idiotic and feeble-minded persons, of whatever age, in any settled community, is not only detrimental to the individuals themselves, but subversive of the best interests of the family and the neighborhood.

The hundreds of so-called senseless human beings constituting the defective population of the United States, who are utterly dependent upon others, and are irresponsible in the eye of the law, make, after all, the lowest strata of the social scale. Next above them stand the helpless creatures supposed to know right from wrong, from whom are drafted nearly all the inmates of our jails; from whom are recruited the ranks of the great army of tramps spread over the land; from whom are transplanted the members of another sorry phalanx of misery—the abandoned prostitutes of our large cities—and from whom, it may be said, perhaps, is drawn the host of alcoholic inebriates more numerous than all the insane, idiotic, blind and deaf, reinforcing the ranks of pauperism by other legions, and sowing a birthright of misery unto children of the third and fourth generation.

Does not the sight of this huge army of defective depen-

dents suggest at once some means of prevention, lest the last stage become worse than the first?

Is not this plea powerful enough to prove the fulcrum upon which an Archimedean lever of right shall move the world of public opinion?

Does it need more to convince that sequestration of such defectives is the only safe plan? Shall I tell you of the home over which the shadow of the affliction of an idiotic child is never absent? Of the worn and weary mother whose entire time and attention is absorbed by the weak one, yet who *must* do her wifely duty by her husband, her motherly duties by her other children, and have hanging over her head the sword of Damocles in the thought that yet other children may come who shall show traces of the fatal blight?

Who can tell what the idiot himself suffers, not alone from internal disturbances, but from its ability, dull and distorted though it be, to see itself as others see it?

Under ordinary circumstances, home environments are the most unpropitious for the welfare of the feeble-minded child; he is the skeleton in the closet; he is put aside from social gatherings lest he mar the harmony; for the same reason he is debarred from the privileges of the church and Sunday-school; normal children shrink from him or taunt him with his condition, and, as an inevitable consequence, the confinement and isolation aggravates instead of ameliorating his condition. It is asserted that any or all results obtained in the institution might be obtained at home. Theory and experience are here hand in hand, both proving that home talent is but rarely capable of producing the effects of the institution, and that, provided the mother were competent, time nor opportunity would serve to enable her to work properly with the defective child without doing injustice to the rest of the family; and, even though other things were equal, the ability to teach and train children of deficient intellect is learned only by long experience and study.

The epileptic idiot has been, up to a very recent date, most decidedly neglected. It would be too rash perhaps to say that no epileptic can be cured outside of an institution; but I do not hesitate to assert that we have in the institution, under the care of a skillful physician, the ideal environment of the idiot afflicted with epilepsy. Aside from any utilitarian idea of preventing the disease by isolating the sexes, which is by no means a bad argument, I am convinced that a treatment in which diet and exercise, strictly enforced and carried out upon physiological and therapeutic lines, which can only be done where the authority of the medical man is supreme, is the treatment of all others the best; and if this fact was only more thoroughly appreciated by the practitioner at large, the younger epileptics would be reached at an age before the "spasm habit" has become too firmly impressed upon the muscular system, and if no better result is obtained than to diminish the spasms in number and force, that surely is worth striving for, and only rarely do we find a case in which no good result is apparent.

Under appropriate treatment, too, the poor victim of this most dreadful disease is able to retain the remnant of mental power he was given at birth, or the shattered remains, dulled and warped by the violent nerve explosions.

It is not necessary to enlarge further upon the theory that institutions for idiots are necessities. The right of the individual idiot to such moral and physical training as his capacity will permit, is just as inalienable as that of his brother whose mental development is closer to the normal.

In conclusion, we may sum up the reasons why idiots should be sequestered in special institutions as follows:

1. The incubus of idiocy is removed from the home which it blights.
2. Idiocy is prevented from begetting idiocy.
3. Complications of the affliction are best alleviated through proper dietetic and medical supervision, and the less afflicted prevented from degenerating into profound idiocy.

4. The industrious abilities possessed by a large percentage, which are useless elsewhere, are here made available.

5. The less afflicted are trained to care for the very dependent, under proper surveillance.

6. They are saved from evil and from temptation which they are unable to resist, when thus placed in a miniature world sans its temptations.

Finally, "The future of this work contemplates far more than the gathering together into training schools of a few hundred imperfect children. The correlation of idiocy, insanity, pauperism, and crime will be understood as it is not now. There will be fewer almshouses, but more work-houses. Jails, criminal courts, and grog-shops will correspondingly decrease, and here and there, scattered over the country, may be villages of the simple, made up of the warped, twisted and incorrigible, happily contributing to their own and the support of the more lowly; cities of refuge in truth, havens in which all shall live contentedly, because no longer misunderstood nor taxed with exactions beyond their moral or mental capacity. They shall go out no more, and they shall neither marry nor be given in marriage in those havens dedicated to incompetency."

ART. III.—Modern Electrical Methods as a Substitute for Surgery in Certain Pelvic Affections.*

By G. BETTON MASSEY, M. D., of Philadelphia, Pa.

PROFESSOR GYNÆCOLOGY, ETC., PHILADELPHIA POLYCLINIC, ETC.

When your Secretary conveyed the honor of a formal invitation to contribute a paper to this meeting, I was conscious of the claims of but one subject on my time and your attention. That subject is the application of electrical energy to the cure of certain pelvic affections in the treatment of which surgery is now so prevalent. My remarks will be brief, and I hope to the point. They will

*Read before Medical Society of Virginia during its Twenty-third Annual Session at Alleghany Springs, Va., September 13-15, 1892.

necessarily include a slight reference to the present infatuation for the amputation of various diseased and healthy portions of the body, for the reason that the claim will be made that many of these deviations from organic health may be cured by the intelligent use of this force without resorting to so extreme an experiment.

One branch of this subject—the treatment of conditions for which wholesale castration is now practiced—may be of such importance to you any day in deciding the fate of an individual patient that you are less likely to consider its wider moral and economic bearing on society; and I shall therefore, confine my attention to the relative value of electricity and the knife in its application to the individual case. In criticising the results of opponents, I shall be in no sense personal, though I desire to be understood as testifying to results in both cases by the right, and in the light of a personal experience of some magnitude, and in no particular on hearsay evidence.

The class of cases alluded to is that generally spoken of by the patients themselves as possessing diseased ovaries; at least that is the diagnosis mentioned by the patient when she comes to see you as having been made by Dr. So-and-so, who either told her that an operation was necessary at once, or had postponed it for a few weeks, during which a half-hearted attempt to avert it is made. The exact diagnosis made by the surgeon, in case he really formulated a diagnosis before opening the abdomen, was doubtless that of diseased ovaries and tubes—a salpingo-oöphoritis.

Now, I do not question for a moment the correctness of this diagnosis in a considerable proportion of cases, but I wish to be understood as asserting that the case is rare in which a salpingo-oöphoritis is the true diagnosis in the sense that it is the most prominent feature of the disease with which the patient is suffering. What is the condition of the uterus in these cases? Is it possible that a disease which arises primarily in a catarrhal inflammation of the uterine cavity should always abandon its original habitat? My investigation of these cases nearly always points to the

continued existence of uterine inflammation in conjunction with the later-developed tubo-ovarian mischief; and the result of therapeutic efforts directed to this original seat of disease is such as to prove that until directly treated it is apt to remain the most important element in the case. In other words, the conventional diseased ovary is a myth rather than an affection of primal importance, unless there exists a destructive inflammation of the organ, a cystoma, an encysted pus tube, or tuberculosis of the appendages, all of which are far more infrequent than has been claimed.

I am by no means insensible of the fact that inflamed ovaries and tubes are daily, even hourly, removed by abdominal section, for I have frequently seen them removed, and have even more frequently seen them brought into society meetings by the bucketful; but the unfortunate fact remains that the patients from whom they are removed are rarely in better health afterwards, and are often made worse. To an inflamed and hypertrophied uterus, to which they owed mainly their original suffering, has been added the suffering from inflamed and cicatrized nerves, painful stumps, bowel adhesions, and irregular climacterics, not to mention the peculiar effect on the nervous system often following castration. The enlarged uterus may be remedied by proper treatment after the operation, it is true, but I do not find it easy to relieve the patients from the traumatic adhesions and other additional consequences of the operation.

My plea is for a recognition and proper treatment of the metritis in these cases; if this is done, the patients may be cured, even though nine-tenths of the present brilliant abdominal surgery remains undone.

The best mode of curing this metritis, I am well convinced, is by electricity, and for the reason that we are not possessed of any other agency that will, at one and the same time, combat the microbic catarrh of the endometrium, promote absorption of parenchymatous hypertrophies, contract the uterine muscular tissue, and improve the nutrition of the part. I can best illustrate its mode of applica-

tion and action by giving you brief outlines of a typical case.

A young lady of 21 years was referred to me by Dr. Chambers, of Kingston, N. Y. She had always been delicate, and since the advent of puberty, at 16, quite irregular. Since her eighteenth year intense menorrhspasms occurred at the periods, for which she was promptly sent to Prof. Thomas, of New York. For three years she was at intervals under his care, or that of a physician of the Woman's Hospital of the State of New York, and as she got no better she was told that an operation for the removal of the ovaries would be necessary, and she was urged to have it done. Several other eminent surgeons, on being consulted, agreed to this. A pessary had been inserted, adding greatly to her discomfort. On admission to my private hospital she was suffering continuously throughout the month, except two or three days after each period, the pain being the well known variety situated apparently in the ovaries. Walking caused much pain, and even rocking in a chair was followed by soreness. The ovaries showed, on examination, to be about the size of almonds, and apparently healthy in every way, except that the left organ floated lower than usual. A point to the left of the uterine body was tender, and this tenderness, though of clearly uterine origin, had probably been thought to be ovarian by previous attendants. Attempts to lift the uterus itself were much more painful. This organ was low, retroposed and had a cavity of three and a quarter inches—an unmistakable indication in one so young. There was a copious catarrhal discharge considering the social condition of the patient.

This case was placed on daily vagino-abdominal applications of both currents before more active treatment was begun. The rest-cure methods were also vigorously applied. Improvement being slow, intra-uterine treatment was cautiously added in view of the possibility of there really being true ovarian disease. These applications were always of both currents, the positive galvanic and fine wire faradic; later primary swelling faradic currents, and though aggravated tenderness followed the first manipulations, their value was not long in showing. The next period was easier, and by the end of two and a half months the uterus had shrunken to normal, and the patient was free from both pain and tenderness.

This case can be duplicated by many others on my books—

some of which have been reported elsewhere—and is merely detailed here as an average instance. In summing up the value of the result attained, we should not merely congratulate the patient upon a disappearance of suffering and a restoration to health, but remember also that this young lady was saved from the horrible alternative offered her by eminent surgeons; she is still as nature made her, a whole woman, and need not go listlessly to a quickened old age with sad and unavailing regrets.

Contrast this case with some observed by me recently after a different mode of treatment had been practiced. A young married lady consulted me three months after a complete castration. The uterus, still enlarged and tender, continued to excite the full quota of suffering experienced before the operation, to which was added the exquisite pain of a neuromatous stump. This tearful woman regretted the surgeon's haste too late. Another married lady was seen two years after a similar operation. Here the uterus had shrunk considerably, but was still as tender, and the evidence of metritis remained in a continuous uterine leucorrhœa. Her unstrung nerves and ever-present ill-health were but poor compensation for the lessened pains that she alone could boast of in my experience. Another case had been similarly operated on by a famous young surgeon two years before I saw her. When seen by me she wished to have the uterus itself taken out, as her suffering was worse; the uterus remained large and abnormally hard at the end of the two years after the operation, and the catarrhal discharge was most copious and offensive. Still another case of total failure to relieve at the end of three years occurs to me, among many such that have been seen in public and private practice—all due to the fact that the worst part of the disease was left untouched in the uterus when the ovaries and tubes were removed.

Referring again to the electrical treatment of this condition, I have carefully analyzed its action in my own cases with a view of ascertaining its bearing on the theory of some that the affection is not local, but merely a disorder of

the nervous system. As elsewhere explained, the results corroborated the belief that associated neurasthenias, etc., were generally secondary, for no matter how necessary was the general treatment for the nervous and digestive systems the local intra-uterine applications were essential to a cure. The quickness and certainty of the result depended far more on the skill and judgment displayed in these applications than on any other portion of the treatment. General galvanic stimulation, massage, and the rest-cure methods, are often essential, but unless the local seat of the disease is reached, they will fail to cure.

Another branch of my subject relates to the treatment of fibroid tumors of the uterus by the methods first systematized by Apostoli. You have all heard of the Apostoli treatment, of course, but your recollections of the matter possibly comprise the mere fact that some one of more or less prominence has pronounced it good for hæmorrhagic cases, or that some one else has said that it was useless, or worse than useless. I will mention a few facts in the matter:—Sixty-eight cases of uterine myo-fibromata have received this treatment at my hands, and of this number sixty-four were cured of pressure, pain, and hæmorrhage, and reduced in size to various degrees, from a merely appreciable amount to total disappearance. Seven tumors disappeared entirely by absorption while under treatment—one of them as large as an adult head. Of the four cases not benefitted, but one—an intra-uterine cystic myoma—was made worse, demonstrating the harmlessness of the method in all other varieties.

The best results are not to be attained in the electrical treatment of fibroid tumors by triflers, jacks of all trades, or surgeons who wish to nurse a case for operation; nor even by the most conscientious man who is unfitted for the attainment of expertness in it by reason of an ambition to shine as an abdominal surgeon, for it is a work demanding as much devotion as any other in the present limits of specialism. While this is so, there are yet useful modes of applying electricity to fibroid tumors that are easily employed

by the 'prentice hand, and much good and no harm will result from their adoption by the general practitioner who is earnest though unfamiliar with the work. It is not generally known that the myomatous forms of these growths may be greatly helped by strong currents merely passed through them from the skin surfaces by means of large electrodes. The vagino-abdominal method also may be reasonably well-employed by the non-expert, and is useful, to some extent, in the most fibrous variety. What I wish to emphasize is that the failure of the inexperienced to get the best results in bleeding cases, or in reducing the size of any kind, is no sign that these cases will not yield to skilled hands. The workman may have been a good physician or a good surgeon, but a poor electro-therapist.

The electrical treatment of those tumors to which the method is applicable is a demonstrable success, and will yield one hundred per cent. of good results. It should commend itself to physician and patient alike on account of the certainty of attaining at least a permanent arrest of the tumor, relief from suffering, and some reduction in size, together with a possibility of a great reduction in size, and even total disappearance by involution and absorption. The relative advantages of the method are not lessened by the fact that these results are attained without danger or material discomfort; without sacrificing any possibly healthy portion of the body; and by a process that ameliorates the patient's condition, locally and generally, from the beginning of the treatment.

It is now conceded that the abnormally soft and the degenerating or cystic varieties of this growth are not amenable to the more active forms of this treatment.

The size of a tumor is no bar to its successful treatment by electricity if otherwise suitable; yet the profession should be urged to search for the little tumors, and apply the method when they first show an existence, as they are then more quickly brought under its influence. It is the little tumors that are not discovered, for my patients invariably

give a history of treatment directed to so-called displacements and ovarian disease at the inception of the tumor formation, the growing nodule having been entirely overlooked.

Finally, I desire to say a few words about displacements—that all-important topic with the older gynæcologists—their true nature, and the place of electricity in their rational treatment. When I mention displacements, your thoughts will doubtless revert at once to pessaries and other means of mechanical rectification and support, and such a mental attitude has ample excuse in the present practice of many masters in gynæcology; yet the terrible abuse of these devices is, in the face of both their practical failure to cure or even relieve in most cases, and of a recent correction in pathological views, which exempts them from a rational basis of action. It is now understood that the great majority of cases of so-called displacement are secondary to catarrhal and microbic invasion of the uterus. The engorgements are not now regarded as secondary to the displacement, but as a part of the causal inflammation, the displacement being merely symptomatic in all but those rare instances where a fall or heavy lifting has caused an acute retroversion or prolapse. In these rare cases, and in the relaxation of the atrophied vaginæ of multiparæ and aged women, mechanical support is indicated and valuable, but the great majority of displacements require removal of the causal inflammation and toning up of the secondary relaxations. The value of the galvanic current in chronic metritis has already been alluded to, and in these conditions its quick correction of the primary endometritis and hyperplasia is vastly aided by the muscle-contracting power of the faradic current. The true cure of the trouble is by a restoration of normal tone and tissue activities, rather than by placing an abnormal and ultimately harmful skeleton within the vagina.

212 South Fifteenth Street.

ART. IV.—Successful Case of Colectomy for the Closure of an Artificial Anus—with Remarks.*

By **SAMUEL T. EARLE, M. D.**, of Baltimore, Md.

LATE RECTAL SURGEON TO THE UNION PROTESTANT INFIRMARY; PRESIDENT MARYLAND STATE BOARD OF MEDICAL EXAMINERS, ETC.

The case I am about to report is the last one of three *inguinal colotomies* I reported to the Medical and Chirurgical Faculty of Maryland at its last annual session in May, 1892, and was subsequently published in the *Virginia Medical Monthly* for June of this year. The colotomy was done for an ulceration of the upper part of the rectum and sigmoid flexure of the colon, that seriously threatened the life of the patient. By the opportunities it afforded for subsequent local treatment and physiological rest to a portion of the diseased intestine, it unquestionably saved the life of the patient, and he was discharged from the hospital two months after the date of the operation cured.

Although he got along remarkably well subsequently with his artificial anus, as a rule having but one evacuation of his bowels in twenty-four hours, and that at a stated time each morning before leaving his room, yet occasionally whenever his stools became loose, he would have a stool when totally unprepared for it, and at a time and place that would embarrass him very much. He soon concluded to have the artificial opening closed, even at the risk of the danger he was told would attend it.

In performing the colotomy, a sharp spur had been made intentionally by drawing the bowel well through the abdominal opening, in order to give the diseased portion below complete rest from the passage of irritating faecal matter over its surface. The incision in the intestine had also been made large to permit liberal flushing and free egress for the faecal and other matters, which came away copiously.

The result of these two procedures was to effectually exclude the subsequent closure of this opening, by any other

*Read before Medical Society of Virginia during its Twenty-third Annual Session at Alleghany Springs, Va., September 13-15, 1892.

means known than that of *colectomy*. Such, at least, was the opinion of all whom I consulted about it.

After carefully deliberating upon the various methods of performing *colectomy*, I finally decided to adopt that recommended by Dr. Wm. Halsted, of the Johns Hopkins, so far as it relates to suturing the resected ends of the intestine, by far the most important part of the operation. Dr. Halsted very kindly showed me the special features of his method on the intestine of a dog under chloroform, demonstrating the great strength of the fibrous coat of the intestine; how to pick up a thread of it with each stitch without entering the lumen of the bowel; the importance of, and how to take the presection stitches; and finally, his quilt suture for the last row, to approximate the serous surfaces of the cut ends of the intestine without producing much constriction.

The following day I did successfully a resection of the descending colon of a dog, taking out about two inches of it, under very unfavorable conditions, the bowel being loaded with feces. The dog was killed at the end of five weeks, when it was barely possible to find the point at which the bowel had been resected, nor were there any adhesions.

Twelve days later I did a similar operation on another dog by the same method. He did very well until the second week, when he got the bandages off, the external wound became fly-blown, and he died of general infection at the end of the third week. The autopsy showed no peritonitis; only one adhesion of a knuckle of the small intestine directly over the line of sutures, the lumen of which was not materially interfered with. The point of union of the cut ends of the colon was perfectly satisfactory, and did not show any indication of leaking, even when injected with water under a strong pressure. I have the specimens of the intestine in each case, also microscopical sections, which I herewith exhibit.

The patient in question having decided to be operated upon, entered the hospital, Church-Home and Infirmary, June 6th, 1892. The following morning I ordered him sev-

eral moderate doses of Rochelle salts in order to clear out the bowels thoroughly without producing much irritation, at the same time placed him on a milk diet in moderate quantities.

June 8th, I ordered him pulv. opii, gr. j. in the morning to control farther peristaltic action, to have the surface of the skin around the artificial anus as thoroughly scrubbed and disinfected as possible, and otherwise made ready for the operation that afternoon. All preparations for it were made under the most thoroughly antiseptic precautions. I am indebted for valuable assistance in the operation to Dr. Gavin, House physician, Drs. Jas. Brown and A. B. Giles, anæsthetizer.

I closed the artificial opening in the bowel by a plug of cotton, then drew the edges together with vulselum forceps, using the latter to make traction where necessary. I made an incision in the skin entirely around the artificial anus, about half an inch from the margin. At its lower angle, this brought me in contact with the external epigastric artery, which I ligated and cut. I continued this incision down to the peritoneal cavity, and found the adhesions much more extensive than had been expected. I finally freed the protruding portion of the intestine, with its half inch of adherent abdominal wall, and drew the mass well out of the abdominal cavity. This done, sterilized strips of gauze were applied, just within and around the opening, to protect the cavity from infection. The mesentery, beneath the portion of bowel to be resected, was very much thickened—so much so that it was with difficulty I could see the vessels in it. I then proceeded to tie those vessels in the mesentery that were directly beneath the portion of bowel to be resected. I next took the presection stitches, advised by Dr. Halsted, just external to the proposed line of resection on either side, which, in this case, was about one inch and a half each side of the artificial opening. These presection stitches (as fully described by Dr. Halsted, in his article on "Circular Suture of the Intestine"—see *American Journal of Medical Sciences*, October, 1887,) I found to be most capital for bringing together the corresponding cut ends of the intestine, and for facilitating the operation generally. I then cut out the portion of the intestine intended to be removed, about three inches in length. In separating it from the mesentery, I kept close to the margin of the bowel. I did not have to incise, or take out a shaped piece of the mesentery, as the

portion of the intestine removed was so short there was very little puckering.

After having tied the presection stitches, I then proceeded to take the line of quilt sutures on either side of the cut ends of the intestine, as also described by Dr. Halsted in the same article. After they all had been placed, and special care having been used to take up a portion of the fibrous coat of the intestine with each stitch, as well as not to enter the lumen of the bowel with any of them, I then tied them and found the cut ends remarkably well-adjusted, and apposed. The bowel was then dropped back in the abdominal cavity, after having been first washed with boiled water and the abdominal opening closed by a double line of sutures, on account of the extensive adhesions, and the tendency to bleed from their torn and cut surfaces, which required a great many ligatures.

The operation was much more prolonged than I had expected, taking four hours and a half, but the patient came from under it in very good condition. He was given several hypodermics of morphia sulphate gr. $\frac{1}{4}$ in the following twenty-four hours, to control any action from the bowels, or pain, and placed on a milk diet.

He did well until the second day, when his temperature rose to 103° F. without any apparent cause. It gradually declined without any other unfavorable symptoms showing themselves until the sixth day, when I found that the abdominal wound had been infected, and pus was forming freely between the deep and superficial row of stitches, but was entirely and completely shut off from the abdominal cavity, as subsequent events proved. This of course caused the external wound to heal by granulation, and delayed his recovery somewhat; but he went on steadily to improve and left the hospital at the end of the third week.

His bowels were first moved on the seventh day after the operation without any difficulty, and so continued to act.

In conclusion, I cannot too highly recommend the method of enterroraphy advised by Dr. Halsted, not simply because my patient recovered under it, but because of the confidence it gives one at every step, as each one prepares the way so well for the one that is to follow; and, finally, when it has been finished, it presents the idea of completeness and stability.

The key-note of this method is the recognition of the

strength of the fibrous coat of the intestine, and its importance in the success of this operation, doing away with the necessity of any plates or other foreign object to strengthen the union, the fibrous coat being all-sufficient. Dr. Halsted was the first to call attention to this fact.

With the intestinal suture made so complete, as by this method, there remains but one serious drawback to colectomy, for the closure of an artificial anus, becoming a comparatively safe operation, and that is, the difficulty of making it thoroughly aseptic. With a surrounding surface that has been exposed for months to the contaminating influence of feces, and with the open ends of the intestine to manipulate, it is very difficult indeed to prevent infection of some portion of the wound; yet, with extreme care and thorough irrigation while tying the last row of stitches, and until the bowel is ready to be dropped back in the abdominal cavity, good results in this respect may likewise be quite confidently looked for.

ART. V.—Selected Cases from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

By JOHN DUNN, M. D., of Richmond, Va.,

CHIEF OF CLINIC OF RICHMOND EYE, EAR AND THROAT INFIRMARY.

CASE XIV.*—A Second Case of Inveterate Tic Douloureux of Reflex Nasal Origin. Remarks upon the Case, Together with Certain Observations in Regard to the Best Method of Dressing, and the After-Treatment of the Nasal Passages following Operations in the same.

In the *Virginia Medical Monthly* for February 1892 (Case I of this series of clinical observations) is reported a case of tic douloureux of fifteen years duration, relieved in a few minutes by the removal of the hypertrophied end of the inferior turbinate bone. Six months later, there had not been the slightest return of the pain, from which, during

* The numbering of these cases refers to the order in which they are being selected for Report and Remarks from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

the previous fifteen years, the patient had never been entirely free.

The following case, differing only in the details, serves, however, to accentuate certain of the remarks called forth in the report of the first case.

July 26th, 1892. Col. W., aged 60, has suffered for the past twelve months from severe tic appearing chiefly in the area supplied by the intra-orbital branch of the fifth-nerve of the right side. These paroxysmal neuralgic attacks were more or less gradual in their onset; they grew worse and worse, increased the area in which they showed themselves, and shortened the intervals between the attacks, until at the end of twelve months they are more or less constantly present, and are the occasion of great pain. It is true convulsive tic. The neuralgic paroxysms are most severe about the skin adjoining the right ala—"blowing the breath against the face at this point" will precipitate a paroxysm; so will "touching the skin here with the finger," or even "touching a hair of the moustache," "movement of lips in talking," or an endeavor to "kiss his wife," all bring on these neuralgic attacks, which are thus more or less constant as they are severe. Finally, the condition of the patient can be better imagined than described.

Various treatment has been advised and followed, including internal medicine, electricity, spraying of the nose, etc.

It is well to mention here, that lately the tic had been showing itself further in the first division of the fifth, and the region above the eye was beginning to respond to calls formerly noticed only by the second division.

In the light of the fact that the cause of the first case had been found in the nose, this region in this second case was examined first of all. Condition as follows: The septum was straight, but excessively thin. There was broad inferior and lateral hypertrophy of the inferior turbinate of the *right side*, sufficient to impinge against the septum; posterior hypertrophy of this turbinate not marked. In the *left* nose there was a pointed spur projecting from the septum to the inferior turbinate of this side; this turbinate showed only slight hypertrophy, and this at its posterior or pharyngeal end, not sufficient, however, to touch the septum. The middle and superior turbinates and their regions were normal. No discharges from the nose of sufficient quantity to attract attention. Opening of the nostril of the right side causes marked quivering of the elevators of the right angle

of the mouth, together with the neuralgic tic. The nose was sprayed with 4 per cent. cocaine. In a few minutes rough handling of the tic areas was allowed without pain. The prognosis seemed favorable. The spur was removed with saw from the left nose, while portions of the hypertrophied areas of the right side were snared off.

Condition September, 1892, as follows: Col. W. writes me that he has not "had any pain or soreness for several weeks," and considers himself cured.

In Case 2, there were marked catarrhal symptoms, with much greater hypertrophy of the turbinates than was the case with Col. W. In Case 1, the relief was permanent, and virtually instantaneous, although it had lasted fifteen years. In Case 2, it required several days for entire relief to be obtained. In Case 1, the source of trouble was plainly the posterior hypertrophy of the inferior turbinate; in Case 2, it is uncertain whether the source of the trouble was the turbinate hypertrophy or the septal bony spur, since both were removed about the same time, and the patient was allowed to return home before the swelling and general irritation occasioned by the operations had subsided. In both cases, the application of cocaine to the nasal areas caused a temporary cessation of the tic. In both cases, relief was obtained after various remedies, internal and external, had been tried and had proved to be ineffectual.

Robert Abbé, in 1889, writing of inveterate tic douloureux, says:

"Fortunately, cases of obstinate tic douloureux are not very common. When they become chronic, there are few diseases that produce the agonizing distress of the constantly recurring shocks of acute pain in the cheek, jaw, and often half of the head. It distracts the mind from work. It seizes the victim every few minutes in the midst of conversation, forces tears and exclamations, produces salivary flow in excessive amount, prevents eating and sometimes sleeping, and brings him to the verge of despair. The time of its continuance is often measured by years, and while it does not usually wreck the patient's physique, it exhausts his powers of endurance and work. The storehouse of medicinal remedies has been exhausted without reaching most of the cases, and it has not been until recent

years that *surgery* has been able to rescue these sufferers"—a picture all physicians will readily recognize.

The *surgery* here had reference to means section of the various branches of the fifth-nerve, even of a whole branch with removal of its ganglion. Simple section of the various branches, without removal of the ganglion, has been a "notorious failure" as far as obtaining a cure for tic douloureux is concerned—(Brodie). Unquestionably cases of tic douloureux occur where the removal of Meckel's ganglion is indicated, as in a case reported by Abbé; but these cases are generally, I believe, of traumatic origin, or result from a cause which acts by pressure, *e. g.*, tumors, etc. With these cases, however, there are generally accompanying symptoms or a history, which serve to differentiate them from tic without symptoms other than such as result from the severe pain of the tic itself.

It is not improbable in these cases of fifth-nerve neuralgia, where neurotomy, neurectomy, with or without removal of the ganglion, have failed to relieve the neuralgia, that an examination of the eye or the nose was not made, or if made, was not done so by one understanding the anatomy of the nasal passages, or the conditions of the eye, which can give rise to neuralgia. Where the cause of the neuralgia is an hypertrophied turbinate, or a septal spur, neurotomy or neurectomy will necessarily fail unless sufficient of the nerve be destroyed to, at the same time, deprive of sensation the areas against which the hypertrophy or the spur presses, or to cause atrophy of the turbinate enlargements, etc. An attempt to deprive the whole of one side of the nose of sensation, is rather a formidable undertaking. A patient suffering from tic douloureux reflex from an intra-nasal hypertrophy, can, as a rule, be permanently relieved in a short while by treatment directed to this hypertrophy; while treatment, surgical or otherwise, directed to the various branches of the fifth-nerve, would prove only of temporary benefit, unless so much of the nerve be destroyed as to deprive altogether of sensation the intra-nasal areas, where the cause of the trouble is situated.

This second case but emphasizes the fact that *tic douloureux* may be reflex upon intra-nasal disease, and that where such is the case, it may at times be relieved in a few minutes by proper attention to the nasal cavities, when years of medical skill directed in other directions will prove futile. The use of cocaine as a diagnostic agent again proved of service, and it was also valuable in the determination of a prognosis in these cases. All the writers on fifth-nerve neuralgia admit that simple neurotomy is most frequently a failure, and in a certain per cent. of the few cases where Meckel's ganglion has been destroyed by surgical means that the neuralgia after a shorter or longer time returns. The removal of the ganglion of Gasser, although it has been done for trigeminal neuralgia, has so many unpleasant complications, that it is only to be thought of in extreme cases.

Naturally, in the treatment of trigeminal neuralgia, it is our first duty to consider in each case the possible cause. In cases of traumatism affecting a branch of the nerve or its ganglion, the seat of the trouble is usually plain enough, and treatment should be directed to this region. As a rule, I am inclined to think that in cases of traumatic injury to nerves, internal remedies do no good. Time and counter-irritant applications are of value, while in two cases no relief could be obtained until neurotomy at the seat of the injury was performed. These two cases were both results of contusion of the supra-orbital nerve. The nature of the injury, however, in each case must determine the character of the surgical operation to be attempted.

In the diathetic neuralgias, the peculiar diathesis must be attended to, be it rheumatism, malaria, anæmia, diabetes, gout, syphilis, etc.

In all cases, however, of fifth-nerve neuralgia, when persistent, except those cases where the traumatic origin is evident, it is our duty to make repeated searches for a reflex cause—the two most fruitful sources of reflex neuralgias of the fifth pair being the eye and the nasal cavities; sometimes the ear and mouth furnish the seat of the trouble; occasionally other regions, but when the origin is in these

latter places, the cause is often plain enough. In every case, it is our duty to examine the eye, the origin of many forms of neuralgia, causing aching of various degrees throughout the whole head, and even to the back of the neck, down the spine, etc.

In most of the forms of neuralgia which proceed from eye troubles, however, the eyes participate in the neuralgia they originate, and during the existence of the neuralgia of the peri-orbital region, of the occiput, during the duration of the hemicrania, of the migraine, the eye-balls themselves generally ache, may be sensitive to light, or pain on pressure. In most cases of neuralgia due to refractive or muscular errors of the eyes, the eyes are the seat of pain, and may *weep* at the indignities poured into the stomach as the offending member. If, in medicine, one form of treatment be ever oftener wrong than another, and it is; if the disciples of Æsculapius ever prescribe treatment when the indications are less well understood than in another, and they do; it is where the result is, the usual "tonic to build up the system" as the treatment for "neuralgia."

Where, then, we have persistent fifth-nerve neuralgia, whether it assume the *tic douloureux* form as in the case of Col. W. or not, we should, before we attribute its cause to "malaria," "anæmia," "degenerative changes," or what not, examine most carefully and often for a possible reflex cause; and should the eye, or the ear, or the mouth, or the other regions, fail to furnish one, we should turn our attention to the nasal cavities, and its tributaries, the antrum of Highmore, etc. And an intelligent appreciation of the abnormalities in these cavities will not infrequently reward our examinations with success, and permit us to accomplish a cure which all the treatment in the world, directed to other parts of the body, would fail to effect.

The two most frequent of the intra-nasal causes of reflex trigeminal neuralgia are, perhaps, hypertrophied turbinates and septal spurs or ridges; and while it is beyond the intention of this article to mention the various other possible intra-nasal causes, or the methods employed for their diagno-

sis or removal, it may not be out of place to say a few words in regard to the method of dressing the nasal cavities after the removal of a portion of an hypertrophied turbinate, or an outgrowth from the septum. There are three points which concern us chiefly here; to prevent bleeding, to prevent adhesion between the opposing surfaces, and to promote healing. As these intra-nasal operations are done under cocaine, the bleeding at the time of the operation is generally insignificant; immediately following the operation, it is—until the effects of the cocaine wears off—also slight; but unless means be taken to prevent it, it is not infrequently the case that a hæmorrhage, alarming enough to the patient, although it most generally stops before any damage is done, somewhat profuse, comes on from one to six hours after the effects of the cocaine wears off; sometimes not until the following day. During the operation for the removal of a septal spur or ridge, especially if it be of considerable size, it is often enough the case that the saw and other instruments inserted into the nose lacerate, to a greater or less degree, the mucous membranes adjacent to the spur or over the turbinate opposite.

Following the removal of a spur, the turbinate opposite usually swells, and generally enough to occlude this part of the nose entirely, pressing against the sawn area; and unless care be taken, adhesions between the septum and the turbinate are especially liable to occur; as a rule, the hæmorrhage following the removal of a part of the hypertrophied turbinate membrane is more profuse than that following removal of a septal spur. For a while, I used as nasal plugs, to prevent these hæmorrhages, absorbent cotton dipped into a bichloride solution. This acted fairly well as a hæmostatic, although, for several hours, a more or less profuse bloody mucus would drip from the operated side of the nose, and this was excessively annoying. I found, however, that on removal of the cotton the following day, or the second day, that the wounded tissue had endeavored to send shoots into the cotton, whose removal then left the wounded areas in about the same condition, as far as healing was con-

cerned, as they had been before the cotton was inserted, and that the nose would bleed considerably on removal of the cotton; and that as long as the bichloride cotton plugs were used to keep the swollen turbinates from being in contact with the wounded area, this latter showed but very little tendency to heal.

My next attempt was to make use of hard rubber or gutta-percha plugs, moulding them to suit in size and shape each case. These were found to be in several ways objectionable, for while they, so long as they were in place, would keep the parts separated, they irritated the areas against which they pressed; they were almost useless as hæmostatics; were often the cause of severe neuralgia of the teeth or eye; it was next to impossible to keep them in the position in which they were placed; often the patient would blow them from the nose, and on one occasion a patient swallowed one, so that, whether alone or wrapped in cotton, this form of intra-nasal dressing was abandoned.

The most satisfactory intra-nasal dressing with which I am acquainted is *cotton soaked, so to speak, in the pure semi-solid albalene*. A piece of absorbent cotton of the desired size is taken and rolled into a plug, and then a piece of albalene about half this size is taken and thoroughly mixed into the cotton, so as to form a greasy mass, which is then inserted into the nose in the desired position. The albalene effectually checks the tendency for the raw areas to send granulations into the cotton, and allows healthy healing to proceed beneath it; the greased cotton mass is an effectual temporary hæmostatic, and may be removed at any time after twenty-four hours without causing the tissues below to bleed; furthermore, it is not irritant to the tissues beneath, and it remains in place, nor need it be the cause of neuralgia from pressure. As a rule, this albalened cotton-plug is left in position for forty-eight hours, after which time the nuisance from bleeding is over. I have found it of advantage, following the intra-nasal operation, to brush the whole of the cut surfaces over with a 40 gr. to the ounce so-

lution of nitrate of silver, which both acts as a hæmostatic, and promotes the healing of surfaces to which it is applied.

In certain noses, the position and situation of the spur is such that after its removal the space between the septum and the turbinate opposite is very narrow, so that the two necessarily lie against each other during the healing process. In these cases, it will be found of advantage to brush over the cut surface with chromic acid, which forms a whitish membrane over both turbinate and the cut area, beneath which membrane the healing process takes place with little danger of future adhesion between septum and turbinate.

As for the sprays used at this time for washing out the nose, I know nothing better than a weak solution of common salt or cooking soda, used until the nose is free from mucus; the nasal cavities should then be sprayed with the usual camphor-menthol spray. Time, however, is more needed than any of the sprays.

In conclusion, it may be as well to add that the more one has to deal with neuralgia of the trigeminus, the more will we be convinced that it most frequently results from some ocular or intra-nasal trouble, and that internal medicine should be the court of last resort in these cases.

218 *E. Franklin Street.*

ART. VI.—Some Remarks on Tobacco.

By BEN. H. BRODNAX, M. D., of Brodnax, La.

An article in the *New England Medical Monthly*, last year, on Tobacco, seemed to me, from its general tone, a strong argument, or plea, in favor of its use. It occurred to me that the writer ought to have known what he was advocating, and if so, must be a one-sided reasoner.

It led me to look about. I am a regular smoker for over thirty years, and still smoke. I knew full well the effect of the habit on myself, but, judging from "the plea," I came

to the conclusion that I must be an exception to its (advocated) good effects.

Careful inquiry of over a year, in my clientel, gives me the following results: Ninety-eight out of 123 persons, all white, male and female, use tobacco in some way—aged 18 to 78. Of these, I find ninety affected with impairment of the senses of taste, smell, and hearing; eighty-two have periodic headaches traceable to the habit, for when abandoned for a time, or using less quantity, this symptom disappears in greater or less degree; five have paralysis agitans more or less severe; and 50 per cent. have irregular heart action; eighty-nine are more or less dyspeptic—twenty-two of them badly so; eight cannot always retain all the food eaten unless a stomachic is taken; fifty-two, after smoking during the day, have, later on, a slight defect in walking, a vertigo, usually shown by an inclination to swerve to one side from a straight line; the irregularity always on the same side. More than half complain of forgetfulness, a slight decline in the former powers of memory—some even so far as to forget familiar names of persons whom they see every day.

I said, "Traceable to the use of tobacco," because, when abandoned for a time, these defects seem to remedy themselves without any medication, or only very slight, such as $\frac{1}{100}$ gr. strychnia, *ter in die*. You must "give them something to take;" otherwise advice to "quit" only does not answer the purpose. Among the women (a few—four—of whom smoke), most of them use snuff-sticks (tooth-brush). Dyspepsia, querilousness, constipation, and consequent uterine troubles, are most common complaints, coupled with some of the others mentioned. Some have "palpitation of the heart," which ceases with abstinence and a placebo.

I commenced smoking at thirty years of age, and for the last thirty-one years I have carefully studied my own case. Blessed with a powerful constitution, and commencing its use later in life than thousands of others, I find among my troubles an impairment of taste, smell, and hearing, as the most prominent; slight attacks of dyspepsia if I smoke a little more one day than another. I am very regular in

diet and habits; use no stimulants or sedatives; and take no medicine; still, with all this, I am, to that amount, a sufferer.

That the drug is, in any way, a stimulant I cannot find but that it is a powerful sedative, every one who uses it assert it as such. Its known effect to relax the bowels is an argument against its use. Those who, as physicians, have applied tobacco, in substance, to the chest or bowels, know its deadly sickening effects. To study carefully its medical effects—they are similar to lobelia, which can scarcely be called a stimulant. As a point toward its intestinal action, I will say I have never found *lumbricoides*, even after the use of powerful anthelmintics, in the bowels of those who were regular smokers or chewers.

It will be seen that in my inquiry I have not included the cigarette-smokers under 18 years. From observation, I note that this class of smokers have less power of resistance to morbid influences than those of the same age who do not use tobacco; and there is hardly a healthy cigarette-smoker within my knowledge—that, too, at an age when every act of life tends to strength and vitality. They are flabby, irresolute—cannot stand hard work or play. They take to drinking stimulants to counteract these influences very early in life, by comparison. A country doctor has not hospitals and libraries from which to draw statistics—only his immediate surroundings. Perhaps these are more convincing, because more certain; and putting these small experiences together, it is difficult to see how a physician can recommend the use of tobacco in any form by the human family (for the animal creation is too smart to eat it). Even as a medicine, and in very minute doses, it is dangerous and unreliable, and can be replaced with advantage by ipecac and lobelia.

In making the above observations, I am guided by the relative sensibility of the senses as to age. It might be objected that a man from 60 to 78 would lose naturally the acuteness of these senses; but comparing the same with

others of like age and health, my conclusions are carried out. For instance, $\frac{1}{300000}$ of a grain of strychnia is perceptible to a gentleman who does not use tobacco, while I cannot perceive it. Odors of flowers perceptible to him I cannot recognize; and sounds, that others of my age can hear and locate, are not perceptible to me. The same applies to others whom I have tested. Two men who live near each other, both similar as to age and health—one cannot hear the sounds from the direction of the other's house, while, with the other, the same sounds are distinct.

In about 80 per cent. the eyes are affected with a dryness of the upper lid, which seems to stick to the ball of the eye. There are no granulations, only a dryness of the lids in the morning on waking. This seems to be a fault in the secretion of the mucous membrane. Usually one eye, seldom both, are affected. I call it "smoker's sore eyes."

This is my experience, after a careful study of my surroundings.

ART. VII.—Treatment of Aneurism and of Hæmorrhoids by Hypodermic Injection of Blood-Clot.

By G. K. TURNER, M. D., of Morristown, Tenn.

I recently presented a paper on this subject before the East Tennessee Medical Society, but thinking the method shows great promise of usefulness, I send it to your journal for publication also.

As there is no method possible for treating aneurisms that does not involve either clotting of the blood in the aneurism, or obliteration of the artery, there can be no valid objection to *clotting blood outside of the artery, and then introducing it* where required, by a syringe and hypodermic needle.

My plan is, after using aseptic precautions, to—1st. Draw blood from the patient's arm, the arm of a friend, or, admissibly, from a beast or bird.

2nd. Clot this blood, or allow it to clot spontaneously.

3rd. Strain off the serum.

4th. Inject at the distal side of the aneurism.

Before puncturing with the needle, deaden the skin with a 4 per cent. solution of cocaine, and fill the aneurism at one injection. It will be well to check the current in the artery before injecting, either by tourniquet or manual pressure.

I propose the same clot injection for hæmorrhoids in place of astringents or carbolic acid, which can do no more than originate a clot. Why not use a clot "at first hand?"

Finally, I wish some one to apply the clot injection into the bleeding mouths of arteries, or probably better, by needle puncture of artery and hypodermic injection above the seat of injury. Should the method be tried on varicose veins, special care will be necessary, as here we have an increased danger from embolism.

Of course aneurisms are, and may be, safely punctured, for this has been done for years when using electricity, and I have had no trouble in passing blood-clot through needles.

I hope such surgeons as have an opportunity will put these ideas on trial and report results.

ART. VIII.—The Therapeutic Merit of Combined Remedies.

By STEPHEN J. CLARK, M. D., of New York, N. Y.

In nearly every case where quinia is indicated, it can be advantageously combined with antikamnia, which thus becomes a valuable adjunct to quinia. Quinia, for example, is a most decided febrifuge, and its action is usually promptly reliable; but when combined with this member of the aromatic series, its action is markedly increased. Some individuals, however, cannot take any of the coal-tar derivatives; consequently the use of antikamnia will be inhibited in such cases; on the other hand, some patients cannot take quinine.

An important benefit to be derived from the addition of antikamnia to quinine is that it removes the sense of fullness in the head, constriction about the forehead and tinnitus aurium—so common when the latter drug is administered alone; the disturbing action of quinia on the auditory nerve is suspended to a great extent, and the usual quinine deafness is absent. The combination of these agents in tablet form is a happy one.

The combination of antikamnia with quinia is valuable in the racking headache, with high fever, attendant upon malarial disorders. It is likewise valuable in cases of periodical attacks of headache of non defined origin; of the so-called "bilious attack;" of dengue; in neuralgia of the trigemini; in that of "ovarian catarrh;" and, in short, in nearly every case where quinine would ordinarily be prescribed.

Binz claims specific antiseptic powers for quinia; other writers are in accord with him on this point, and report good results from large doses in septicæmia, pyæmia, puerperal fever, and erysipelas. It is a germ-destroyer of the bacilli of influenza (la grippe). A full dose of quinine and antikamnia will promptly relieve many cases of this disease. In the gastric catarrh of drunkards, this combination is valuable. Quinia is a poison to the minute organism—sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose of antikamnia and quinia will often arrest a commencing pneumonia or pleuritis. This combination is also useful in the typho-malarial fever of the South—particularly for the hyperpyrexia—both quinia and antikamnia, as previously said, being decided fever reducers.

The germicide power of quinia is the explanation of its success in the treatment of malarial disturbances. Thus, it is also a prophylactic against the various manifestations of malarial poison, and as such it can be relied on. The cause of malaria as a disease consists of pigmented bodies, which penetrate the interior of the red blood corpuscles—pigmented bodies of various shapes and flagellate organisms—both

having amœboid movements—the filaments being in active vibration.

In meningeal troubles, attended by marked acceleration of the heart due to the rise in the fever temperature, full doses of quinine and antikamnia at intervals of, say, about four hours, will be productive of good. In measles, large doses of the combination at night—say ten grains of each for adults (doses for children in proportion), will relieve the distress of the catarrhal pneumonia, and modify, in great degree, the amount of the exudative products. The periodical neuroses, which may be either regular or irregular in their manifestations, but which are dependent on the malarial germ for their origin, are all controllable by the combination of quinine and antikamnia. Examples of such neuroses are asthma, laryngismus stridulus, summer catarrh, etc. Indeed, for the hemicrania and neuralgias of malarial origin, the combination of quinine and antikamnia, just alluded to, may be declared *a specific*.

The dose of quinine may be made smaller than usual when administered with antikamnia. Thus, one or two tablets of two and a half grains each of quinine and antikamnia will prove sufficient for great utility in puerperal mania, in the headaches of advanced age, accompanied with vertigo and despondency.

This combination is capable, by the combined influence of each drug on the nervous system and blood, of restraining all the processes which develop heat, organic changes, and muscular motion; therefore, it is “the one thing needful” in the treatment of the hyperpyrexia of malarial fevers. In the vast majority of cases, when necessary to administer quinine, if antikamnia be added to the prescription, the results will be surprising.

Formerly, the idea prevailed that in order to render the treatment of periodical fevers efficient, the gastro-intestinal tube should be cleaned out by emetics and cathartics. This, however, is a fallacy, as the conditions they are intended to remove depend mainly on the malarial poison, for which

the combination of quinine and antikamnia is the specific cure.

In speaking of the treatment of pneumonia by quinine and antikamnia, Prof. Palmer says: "The effects desired, and certainly as a rule produced, are a decided reduction of temperature, a marked diminution in the frequency of the pulse, a decided moisture of the skin or free sweating, a slower and more easy respiration, or relief from pain, and the feeling of fulness of the chest, a diminution of the cough and of the tenacious and bloody character of the expectoration; and, in short, not only is there a checking of the fever, but of all evidences—general and local—of the pulmonary engorgement and inflammation."

In Meniere's disease, or "labyrinthine vertigo," this combination has, by persistent use, entirely removed the trouble in many cases. The curative effects of quinine and the coal-tar antipyretics in sunstroke are well known, and have been used recently with great benefit in numerous instances in this country and in India. In hysteria, and even in epilepsy, the combination of quinine and antikamnia is often indicated, and will frequently give the desired results. In whooping-cough and hay-fever, quinine and antikamnia will prove beneficial.

The tablets of equal parts of quinine and antikamnia, spoken of in this article, can be administered by the rectum, with good effect. They should first be dissolved in whiskey, and then water can be added in any quantity needed—always remembering the total quantity of each drug in such enemata.

66 West Tenth Street.

Dyspepsia.

PILL ANTISEPTIC COMP.—"I certify that Warner & Co.'s Pil. Antiseptic Comp. is an invaluable digestive and Antiseptic Compound, and I cheerfully recommend it to all persons suffering from Dyspepsia, mal-assimilation of food, and especially from fermentative indigestion."—ANDREW L. ANDERSON, A. M., M. D., F. M. S., Rhea Springs, Tenn.

*Clinical Reports.***Case of Spontaneous Umbilical Hæmorrhage in an Infant.***

By JOHN E. WALSH, M. D., of Washington, D. C.

Our fellow member, Dr. Bovée, in an excellent and very exhaustive paper read before the Medical Society of this District (published in *Jour. Amer. Med. Assn.*, Vol. XVI, Nos. 16 and 17), gives a complete history of this uncommon affection, its causes and treatment. It is, without doubt, very rare, for up to the time Dr. Bovée read his paper in which he reports five, only five hundred and thirteen cases had been recorded. I now add another.

Mother, Mary J., colored, single, æt. 17, primipara; was admitted to hospital November 11th, 1891, suffering with pleuritis on the right side, which soon subsided under treatment. Her father and mother are both dead, the latter dying during labor, after having given birth to eleven children—one of which was a still-birth; the cause of the father's death unknown.

Mary is a mulatto, about five feet two inches tall, strong and well nourished, but thick-lipped and not very intelligent. She came to puberty at the age of 14, and has been regular in her menses, which, however, were sometimes accompanied by pain. She never suffered much from sickness, although she had measles a year ago.

The child, a male, was born at full term on January 21st. The labor was perfectly normal, the child being quite large, but thin.

On the second day the cord dropped off. On the 31st of January, ten days after birth, at 7 o'clock A. M., bleeding was noticed at the naval. Liquor ferri subsulphatis and pressure were applied, but only checked the bleeding for a short time. Collodion and compress were now tried, but without avail. The hæmorrhage increasing, at 10:30 o'clock A. M., two needles were passed at right angles through the abdominal wall at the umbilicus, and a silk ligature passed around below them; this checked the external hæmorrhage entirely. Tinct. ferri chloridi and sulphuric acid were also administered internally. Although the bleeding at the

* Read at a meeting of "The Medical and Surgical Society of the District of Columbia," October 10th, 1892.

naval was stopped, the next day a small quantity of blood was passed from the rectum, and the child continued growing weaker, and died February 2nd.

The *post-mortem* examination revealed nothing as to the cause of the hæmorrhage. The child was about eighteen inches long and weighed six pounds. It was very much emaciated and shrunken in appearance, with abdomen distended. The fontanelles were much larger than normal. All the internal organs were of normal size, but very anæmic. The ventricles of the heart were empty, and no blood was found in the intestine, although the child had passed blood from the rectum before death. Both the umbilical vein and artery were pervious and contained dark fluid blood, while the abdominal cavity was filled with it. No clots at all were found.

As Dr. Boyée has written so fully about this disease, and as I have nothing new to offer, it is unnecessary for me to say more about it. Therefore, I simply submit this case without remarks, except to say that there was one peculiarity in it that also occurred in the first one mentioned by him. That is, for several months preceding delivery, both patients suffered from periodical hæmorrhage from the uterus, which led to the supposition that they were trying to produce abortion. What bearing might these hæmorrhages have on the omphalorrhagia in the infant?

924 Penn. Ave., S. E.

Puerperal Eclampsia—A Fourth Case Treated Successfully by Hypodermics of Morphia.

By R. H. GARTHRIGHT, M. D., of Vinton, Va.

I have just had my fifth case of puerperal eclampsia, and cured my patient with hypodermic injections of sulphate of morphia. Three of the other cases were treated in a similar manner, and they all recovered. I am convinced there is nothing that stops these alarming and dangerous spasms like the drug just named. Its effects are almost instantaneous. It soothes the highly-excited nerve-centres, and after a few hours of rest and quiet, all is well again, and the young mother, at the brink of destruction, is brought back

safe and sound, to nourish and bring up her child. My last case was a severe one. From notes taken at the time, I quote:

"Mr. S. T., who lives on the next square, called me up at daylight, October 11, 1892; said his wife had been troubled with headache for two weeks, but since midnight the pain had been terrible. I knew it was nearly time for her confinement. I gave him a prescription for one-fourth of a grain of morphia. In less than ten minutes he called again and urged me to come without delay. I hastened to the house, and found the lady in the midst of a terrible convulsion. I quickly prepared a half-grain dose of morphia, and introduced the hypodermic needle in her arm, but my syringe was out of order, and nearly an hour elapsed before I could procure another. The convulsions came on every few minutes. When she had had five, I was ready, and administered half a grain of morphia hypodermically. Shortly afterwards another paroxysm commenced, but the medicine had permeated her system and the convulsion was very slight. Examination showed that the os had not begun to dilate. She fell into a profound sleep. At the end of five hours, the stertorous breathing had ceased, and she became restless. Gave her another hypodermic of morphia—this time one-fourth of a grain. Ordered enema of warm water and soapsuds. This was used twice, but produced very slight movement of the bowels. She remained comparatively quiet until 2 A. M.; then had another convulsion. I was summoned, and went at once, and gave another dose of morphia, and the next seizure was mild. She had not passed urine for eight hours. Introduced catheter, and drew off a pint of the fluid, which, on being analyzed, was found to be about three-fourths albumen—so thick that it would hardly run out of the test-tube. I filled the lower bowel again with warm water and two ounces of castor oil. This did not bring away any fecal matter, but she fell asleep again.

At 8 A. M., on the 12th, the os was still undilated; but as she was calm and free from headache, I thought it best not to bring on labor by artificial means. She did not expect the birth to take place until some weeks later. Sent for Dr. S. E. Jones, to get his opinion concerning the propriety of emptying the uterus. He did not arrive until late in the afternoon. At 10 o'clock labor began, and was terminated a little before three, without the least trouble. The child, a

boy, was slightly stupefied from the effects of the narcotic, but got along all right without any treatment. The mother was kept on small doses of morphia all the following night, and I then discontinued its use. I gave her a few tablespoonfuls of milk every three hours.

Dr. Jones did not see her until she had been delivered. He suggested hypodermic doses of digitaline. Not being able to procure that drug, I gave lithiated hydrangea of Lambert Pharmacal Company, St. Louis—one teaspoonful every four hours. This caused a free flow of urine. When labor closed, her temperature was $99\frac{1}{2}^{\circ}$.

October 13th—8:30 A. M.—Patient comfortable, except a slight headache. Slept all night. I gave a half cup of coffee and continued milk diet—one-third glass every three hours. Still used lithiated hydrangea. No fever. Ordered quinine to be given—three grains every six hours. Bedding and garments changed, and a 1:4000 bichloride of mercury douche was given. Napkins soaked in a bichloride solution were kept applied to the vulva and vagina, and changed frequently. She was now allowed to see her husband and baby.

Oct. 14th.—Doing well. Changed bedding, and put fresh clean garments on her, and gave a light cathartic. Is free from fever, and is in excellent condition. Will keep up the use of quinine for a few days.

Double Ovarian Cyst, Showing the Necessity Sometimes of Exploratory Operation.*

By E. G. ZINKE, M. D., of Cincinnati, Ohio.

This is a case which has been of great interest to me from a pathological as well as a clinical point of view. It is an instance in which the physical examination certainly did not even indicate the pathological condition, such as was found to exist after the abdomen had been opened. I report the case chiefly because of the lesson it teaches, and to demonstrate that the pelvic cavity is, at times, the site of difficulties unsuspected, though common enough. While I

* Read before the Obstetrical Society, Cincinnati, Ohio, June 16th, 1892. We are indebted to Dr. E. S. McKee, of Cincinnati, for this report.

do not wish to justify, in any way, or defend the hap-hazard interference with the abdominal cavity of the female, yet this case illustrates clearly that, in some instances, we cannot get at the real difficulty until an exploratory incision is made.

This patient, æt. 35 years, has been married for ten years, and it is said at one time she led an impure life, but subsequently reformed.

Dr. Schwab, who had charge of the case for several months, and who subsequently referred the patient to me, gave the following history: The sole and only symptom was frequent micturition by day as by night. Examination showed the urine was perfectly normal, and all the remedies employed for relief failed. Dr. Schwab did examine her repeatedly, but was not able to discover anything particularly wrong with the pelvic organs, except, perhaps, a displaced uterus.

On my first examination, I found the uterus retroverted, a few small nodules on either side of it, and the ovaries themselves could not be distinctly defined. There was some tenderness to the touch. It appeared to be a "*chronic pelvic cellulitis*." The abdomen was as flat as a pan-cake—not especially tender except on deep pressure in the hypogastric and inguinal regions. No tumor could be felt. There was, however, a history of previously existing peritonitis following, I think, an attack of gonorrhœa; so that I was led to believe that the trouble of the bladder was a functional one, perhaps the result of chronic salpingo-ovaritis, with displacement of uterus and adhesions. It is not worth while to name the numerous remedies which were given her; they all failed.

I soon became convinced that this woman could not be relieved unless her pelvic trouble was amenable to treatment. At any rate, I determined to open the abdomen to ascertain the real cause of the difficulty and remove or correct the same. She was put in the Trendelenburg position. The peritoneal cavity was easily entered, and as my fingers went down in the pelvic cavity I came in contact with a flabby cyst, which I at first believed was the bladder. Asking the nurse if it had been emptied, she said "Yes." I then came upon another flaccid cyst. These cysts did not reach above the pelvic brim. The tumor I removed from the right side was about the size of an orange, universally adherent, and contained a number of smaller cysts; in other

words, it was a multilocular cyst of the ovary. This is the specimen from the left side, much shrunken from the alcohol. It has a very large pedicle. After its removal, I found a similar growth of even larger size, and of the same character, on the right side. Like the former, it was universally adherent. Some of the cysts contained dark clear fluid.

Since the operation, the bladder symptoms have subsided, and she is now (two weeks after the operation) virtually well. The operation was performed June 3rd.

These tumors were not felt nor suspected prior to the operation. I expected anything but ovarian cyst. After the removal of the tumors, I broke up the adhesions around the womb, but did not stitch it to the abdomen. The wound was then closed, and a drainage-tube inserted and left in for forty-eight hours. There was considerable oozing. The tube had to be emptied every thirty minutes the first day, and after the first day every two hours.

Case of Albuminuria During Pregnancy. Causing Uræmic Pneumonia—Value of Nitro-Glycerin in Lung Disease Due to Albuminuria *

By C. D. PALMER, M. D., of Cincinnati, Ohio.

Several weeks ago, as I was passing through my ward of the Cincinnati Hospital, I noticed a pregnant woman who looked as if she was having considerable swelling in the face. On examination, I found she had a great deal of swelling. I asked if her urine had been examined, and the interne told me it had, and that it contained a great deal of albumen. Upon examination I found it to contain two or three per cent. of albumen, was greatly diminished in quantity, so scant as a half pint per diem. I found that from day to day the quantity of albumen and the swelling in the face was gradually increasing, and that she was showing beginning signs of puerperal convulsions. I noticed that the foetal heart sounded distinctly at first, but became more and more indistinct each day. I put her on salines, including Bethesda water, and deemed it necessary to induce labor by means of the elastic gum bougie. This was put in about 8 A. M., and that day my interne called me up and told me labor was commencing. The patient was now about the eighth and a half month of pregnancy.

* Read before the Obstetrical Society, Cincinnati, O., June 16th, 1892.
[We are indebted to Dr. E. S. McKee, of Cincinnati, for this Report]

Next morning he told me she had been delivered about half-past eleven o'clock the night before of a living child. The quantity of urine increased up to about thirty ounces per diem. It became less albuminous. On the fourth day, however, following her delivery, the interne called me up and said she was disposed to sit up in bed because of a difficulty in breathing. I directed a dose of the bromide of potash, because I thought it was purely nervous. Next day, when I was there, I found a disease of the lungs; in other words, this woman was having commencing pneumonia or uræmic pneumonia. The quantity of urine was nearly normal, although albuminous. I put her under the influence of carbonate of ammonia and small doses of morphia.

The next morning I found her pulse about 140 to 160, irregular and dicrotic. I immediately called for some nitro-glycerin, and gave her two drops of the one per cent. solution hypodermically. In fifteen minutes the pulse became stronger, full, and more regular. I directed the interne to repeat this dose three times a day. She was thus dosed three times a day for several days, and then by the mouth for several days. The urine became less albuminous, breathing less laborious, and crepitation less, until it was noticed only at the basis of the lungs. There was no trouble whatever in reference to the pelvic organs or secretions, and she was able to nurse her child part of this time.

The quantity of urine continued large, but decreased to forty or sixty ounces per day. At the end of one month the patient was discharged, the structural lesion in the lungs completely resolving.

Now, it is a well-known fact, that the nitro-glycerin has no direct action on the heart, but it has a most potent indirect influence upon this organ. It will also increase the secretion of urine by directing the blood from the kidneys in Bright's disease to the outside of the body. The quantity of urine in this woman became more healthful as the nitro-glycerin was continued.

This is the third case of this kind in which I have employed nitro-glycerin, and I am very much pleased with its action in cases of lung affections arising from disease of the kidneys.

Years ago I always acted on the principle, in treating puerperal convulsions, that, if the uterus was acting, aid it,

but if not acting, do nothing to stimulate its action. My patient was at the eighth month when seen, and about eight and a half months when I induced labor. I was fearful for the mother, but almost certain that the child would be born dead. When this might happen, neither I nor anyone could foresee. It is true that the dangers of puerperal convulsions are getting less. Once the mortality was about 50 per cent.; now not more than 20 per cent. is the mortality. But the death rate for the child is, and always will be, high. It is 65 per cent.

I did not report this case to induce the discussion on puerperal eclampsia. Venesection and chloroform belong to the poet. Our best remedies, after purgation and free diaphoresis, are chloral per rectum, morphia hypodermically, and veratrum viride by the mouth. Very large doses of the last remedy are well borne, for it is largely self-protective in its action, and it aids and is aided by morphia hypodermically. These three remedies ought not to be administered in all cases. The quantity of each, the frequency of administration, and the extent of the association with the other remedies, will, of course, depend upon the case, its severity and its special variety.

Proceedings of Societies, Boards, etc.

MEDICAL EXAMINING BOARD OF VIRGINIA.

The Second Semi-Annual meeting of the Eighth Annual Session was held at Alleghany Springs, Va., September 13th, 1892, at 5 P. M., Dr. Hugh M. Taylor, President, in the chair.

Upon roll call, the following members responded to their names: Drs. Sam'l W. Budd, Petersburg; J. E. Chancellor, Charlottesville; O. B. Finney, Onancock; P. B. Green, Wytheville; R. D. Huffard, Chatham Hill; Rawley W. Martin, Chatham; W. P. McGuire, Winchester; Jacob Michaux, Richmond; Herbert M. Nash, Norfolk; Thos. W. Simmons, Martinsville; T. James Taylor, Walthall's Store; Hugh M. Taylor, Richmond; R. F. Young, St. Clair's Bottom; H. M. Patterson, Staunton; Bedford Brown, Alex-

andria; Jno. W. Dillard, Lynchburg; Ro. Glasgow, Lexington; G. D. Meriwether, Buena Vista; Leigh Buckner, Roanoke.

The minutes of the preceding meeting were read and approved.

Dr. Sam'l T. Earle, President of Medical Examining Board of Maryland, was invited to attend the various meetings of the Board.

Questions of various examinations were discussed, altered and adopted as usual. The question then came up as to accepting the certificates of Boards of other States, and was decided adversely.

The President then addressed the Board on the subject of his circular letter during vacation regarding proposed changes in the method of conducting examinations. After free discussion, in which Dr. Chancellor and others took part, it was decided not to put the plan proposed into operation until the spring meeting in April, 1893. Adjourned.

September 14.—Meeting called to order at 9 A. M. by the President. Routine business was transacted. Drs. Hugh M. Taylor, R. W. Martin and J. Michaux were appointed a committee to draft a plan perfecting the change of method in conducting examinations, which was approved yesterday.

Dr. Chancellor moved to appoint Dr. Hugh M. Taylor to present to the Medical Society of Virginia the proposed changes in the law regulating the practice of medicine and surgery in Virginia, which was unanimously carried. Adjourned.

Board met Friday morning, September 16th, and filled out the certificates of successful applicants and tabulated the results.

The President, Dr. Hugh M. Taylor, who was a delegate to the meeting of the Medical Examining Boards of the various States at Washington, D. C., reported upon his attendance there. Adjourned.

J. MICHAUX, M. D., *Secretary*.

The following Examination Questions, after full discussion by the Board, were adopted:

Examinations September 14th and 15th, 1892.

I.—SECTION ON CHEMISTRY.

Members:—Drs. P. B. Green,* of Wytheville, *Chairman*;
A. C. Palmer, of Norfolk; Benj. Harrison, of Richmond city; T. O. Jones, of Harrisonburg.

Ques. 1. Define the terms atom, molecule, radical, compound radical, and valence.

Ques. 2. What is chlorine? Give mode of preparation, and physical and chemical properties.

Ques. 3. Give the physical and chemical properties of glucose. State how it is obtained and how it may be distinguished from cane sugar.

Ques. 4. What are alkaloids? Mention three of the more important, and give the physical and chemical properties of each.

Ques. 5. What are the properties of ozone? In what respects does it differ from common oxygen?

Ques. 6. What specific gravity of the urine would indicate the probable presence of sugar? Give the details of a reliable test for its detection.

II.—SECTION ON ANATOMY.

Members:—Drs. Hugh M. Taylor,* of Richmond, *Chairman*; Wm. P. McGuire,* of Winchester; R. D. Hufard,* of Chatham Hill; Joseph T. Southall, of Jetersville.

Ques. 1. Describe the anterior cerebral fossæ.

Ques. 2. Name and describe the ligaments of the knee joint.

Ques. 3. Describe the diaphragm.

Ques. 4. Describe the coronary arteries, and name the branches of the thoracic aorta.

Ques. 5. Give general and descriptive anatomy of the male urethra.

Ques. 6. Name the nerve and vascular supply of the eye.

III.—SECTION ON (I) HYGIENE AND (II) MEDICAL JURISPRUDENCE.

Members:—Drs. O. B. Finney,* of Onancock, *Chairman*;
Thos. W. Simmons,* of Martinsville; J. E. Chancel-

lor,* of Charlottesville; James W. Tankard, of Burgess' Store.

I.—*Hygiene.*

Ques. 1. State the precaution necessary in securing cow's milk and its preservation as a diet for adult invalids and children.

Ques. 2. What atmospheric conditions and localities favor sunstroke? The class of persons generally effected, and precautions necessary to avoid it?

Ques. 3. State period of incubation of small-pox and cholera, the time necessary to quarantine against, and the steps necessary to stamp out the diseases in a dwelling, ship, or community.

II.—*Medical Jurisprudence.*

Ques. 1. Give the important external and internal *post mortem* appearances of death by drowning, and the modes of resuscitating the apparently dead.

Ques. 2. State in detail the symptoms that would lead to the suspicion of death in poisoning by arsenic and by strychnine, and the *post mortem* appearances in each.

Ques. 3. Give the tests by which you can distinguish between a child still-born and one dying after birth.

Ques. 4. Give the three principal divisions of baths, temperature of each, and the rules governing their hygienic and therapeutical uses, and the dangers that arise from imprudent use.

IV.—SECTION ON PHYSIOLOGY.

Members:—Drs. Robert Glasgow,* of Lexington, *Chairman*; R. F. Young,* of St. Clair's Bottom; John W. Dillard,* of Lynchburg; Wm. S. Christian, of Urbanna.

Ques. 1. Give the physiology of the lymphatic system so as to include the following items: (1) Anatomical structure and arrangement of lymphatic vessels, from their origin in the tissues to their place of communication with certain veins; and (2) special office of lymphatic glands.

Ques. 2. Describe the coats of the arteries, and tell how the pulse wave is transmitted along them.

Ques. 3. Describe the ciliary muscle, and tell the changes that occur in the structure of the eye in looking from a near to a distant object.

Ques. 4. What is the origin and destination of glycogen?

Ques. 5. How does the pneumogastric nerve influence the heart beat?

Ques. 6. What effects follow section of the facial nerve after its exit from the stylo-mastoid foramen?

V.—SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Members:—Drs. C. C. Conway, of Rapidan, *Chairman*; A. Trent Clarke, of South Boston; S. W. Budd,* of Petersburg; James Parrish, of Portsmouth; M. A. Douglass (Homœop.), Danville; Young (Homœop.), Lynchburg.

Ques. 1. Arsenious acid, dose, physiological action and therapeutics.

Ques. 2. Describe copaiba, where found, and what are its medicinal uses.

Ques. 3. Give dose and therapy of the following preparations of mercury: Hydrargyri chloridum corrosivum; hydrargyri iodidum viride; hydrargyri iodidum rubrum.

Ques. 4. Give dose and uses of cascara sagrada, eucalyptus, hydrastis canadensis.

Ques. 5. Name the most efficient antispasmodics; give dose of each.

Ques. 6. What are "excito-motors," and what are "depresso-motors"? Give example of each group, with dose.

Ques. 7. Name and give dose of principal diuretics.

VI.—SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Members:—Drs. Herbert M. Nash,* of Norfolk, *Chairman*; B. L. Winston, of Hanover C. H.; G. D. Meriwether,* of Buena Vista; H. M. Patterson,* of Staunton; George A. Tabor (Homœop.), of Richmond city.

Ques. 1. To what diseased conditions are pregnant women most liable, giving briefly the pathology of each?

Ques. 2. Mention the methods of determining the presentations and positions of the fœtus at term.

Ques. 3. How would you proceed upon finding an arm presenting or protruding during labor?

Ques. 4. What measures are absolutely necessary to prevent septic infection during the process of parturition?

Ques. 5. Give the diagnosis of pelvic peritonitis, its treatment and possible sequelæ

Ques. 6. Name and briefly describe the plastic operations

most frequently necessary to repair the injuries resulting from labor.

VII.—SECTION ON PRACTICE OF MEDICINE.

Members.—Drs. Rawley W. Martin,* of Chatham, *Chairman*; Bedford Brown,* of Alexandria; R. I. Hicks, of Warrenton; T. James Taylor,* of Walthall's Store; W. P. Jones (Homœop.), of Petersburg.

Ques. 1. State the probable causes and prognosis of angina pectoris.

Ques. 2. Give the symptoms and physical signs of aortic insufficiency (regurgitation), and diagnose it from mitral obstruction.

Ques. 3. Give the circulatory, respiratory, and digestive symptoms of chronic anæmia.

Ques. 4. Differentiate broncho-pneumonia (lobular pneumonia) from lobar pneumonia.

Ques. 5. Explain how the malarial poison obtains access to the human system.

Ques. 6. Give the morbid anatomy of acute intestinal catarrh.

Ques. 7. Give the morbid anatomy of catarrhal jaundice.

Ques. 8. Give the treatment of enteralgia, due to flatulence.

VIII.—SECTION ON SURGERY.

Members.—Drs. Wm. L. Robinson, of Danville, *Chairman*; Leigh Buckner,* of Roanoke; Jacob Michaux,* of Richmond city; Kent Black, of Blacksburg; F. Webster (Homœop.), of Norfolk.

Ques. 1. Diagnosis and treatment of penetrating wounds of the abdomen, with visceral lesions.

Ques. 2. Diagnosis (differential) of fracture of surgical neck of humerus and dislocation of head of same.

Ques. 3. Differential diagnosis in detail of chancre and chancroid.

Ques. 4. Differential diagnosis between vesical calculus and simple chronic cystitis, and treatment of each.

Ques. 5. Symptoms of arthritis and synovitis.

Ques. 6. Differential diagnosis of tetanus, hydrophobia and spinal meningitis.

ALPHABETICALLY ARRANGED LIST OF THE APPLICANTS FOR EXAMINATION TO WHOM
 LICENSES WERE GRANTED TO PRACTICE MEDICINE IN VIRGINIA, AFTER DUE
 EXAMINATION SEPTEMBER 14TH AND 15TH, 1892. WITH THEIR
 POST-OFFICES, COLLEGES AND YEARS OF GRADUATION.

<i>Name.</i>	<i>Post-Office.</i>	<i>College of Graduation.</i>	<i>Year.</i>
Dr. A. A. Armstrong....	Alms House Hospital, N. Y	University City N. Y.	1891
" B. F. Babb.	Berlin, Southampton Co., Va.....	University of Maryland.....	1892
" J. D. Buchanan.....	Marion, Va	Bellevue Hosp. Med. Coll., N. Y.,	1892
" C. T. Cadwell.....	Hampton, Va	Hahnemann Med. Coll., Chicago..	1890
" D. F. Dinsmore.....	Lynchburg, Va.....	University Louisville, Ky.....	1872
" R. F. Eubank	Brown's Store, N'th'berl'd Co., Va.,	Coll Phys. and Surg., Balt., Md...	1892
" F. W. Hains..	Petersburg, Va.	University of Maryland.....	1888
" C. P. Harshbarger..	Good's Mills, Rock'ham Co., Va.,	Kentucky School of Medicine. .	1892
" Albert Johnson.....	Lynchburg, Va.....	Howard University, D. C.....	1892
" W. R. Jones	Richmond, Va.	University of Virginia.	1892
" A. J. Koontz..	Independence, Va.....	Coll. Phys. and Surg., Balt., Md...	1887
" Samuel Lile	Lynchburg, Va.....	University of Louisville.....	1888
" J. J. McCormick...	Berryville, Va.....	University of Virginia.....	1892
" Syl. L. Nidelet.....	Gunston, Fairfax Co., Va.....	St. Louis Med. Coll. (closed)....	1852
" W. B. Payne..	Covington, Va.	University of Virginia.....	1892
" C. L. Purdy	Ebony, Brunswick Co., Va.....	Southern Med. Coll., Atlanta, Ga.,	1890
" Wm. P. Parrish, ...	Weal, Pittsylvania Co., Va.....	Baltimore Med. Coll.	1891
" W. L. Straw	Rural Retreat, Wythe Co., Va...	Coll. Phys. and Surg., Balt.,	1892
" Nash P. Snead.....	Fork Union, Fluvanna Co., Va...	Non-graduate.	
" W. D. Shadrach....	Mitchell's, Culpeper Co., Va.....	University of Virginia.....	1892
" W. B. Stoner.....	Northumberland, Pa.....	Univ. Pa. and Ky. School Med..	{ 1866 1892
" Sidney J. Tabor...	Bluestone, Tazewell Co., Va.....	Univ. Nashv. and Vanderbilt U.	{ 1891 1892
" H. P. Thompson...	Woodstock, Va.....	Med. Coll. State S. C., Charleston.	1890
" G. K. Vanderslice..	Norfolk, Va	University of Virginia..	1892
" D. H. Worthington.	Hampton, Va.	Rush Med. Coll., Chicago.....	1879
" Reid White.....	Lexington, Va.	University of Pennsylvania.....	1892
" J. C. Wynkoop.....	Paxson, Loudoun Co., Va.....	University of Maryland.....	1892

Nos. of exami- nation papers.	LIST OF INSTITUTIONS WHOSE GRADUATES WERE REJECTED BY THE MEDICAL EXAMINING BOARD OF VA., AT ITS REGULAR FALL SESSION, SEPTEMBER 14TH AND 15TH, 1892. With Percentage Marks received in each Section.										Remarks.
	COLLEGE OF GRADUATION.										
	Chemistry.	Anatomy.	Hygiene and Med. Jurisprudence.	Physiology.	Materia Medica and Therapeutics.	Obstetrics and Gynecology.	Practice.	Surgery.	Aggregate.	Average percentage	
5	No College given.....										withdrew.
7	University of the South, Sewanee, Tenn.....	70	40	65	75	70	76	78	61	535	67
14	Baltimore Medical College.....	50	75	60	95	74	83	64	50	351	69
20	University of Maryland.....	77	60	75	60	72	65	75	62	546	68
25	Non-Graduate.....	34	72	75	85	65	75	75	75	546	68
32	Medical College of Virginia.....	50	34	75	75	52	80	65	97	528	66
30	Non-Graduate.....				10	10		5		25	

INSTITUTIONS REPRESENTED BY THE APPLICANTS WHO CAME BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA, IN SESSION AT ALLEGHANY SPRINGS, VA., September 14-15, 1892.						Total Number Applicants from each College.	Total number Applicants Licensed from each College.	Total Number Applicants Rejected from each College.	Withdrawals.
University of Virginia—Medical Department.....	.....	.....	.....	.....	.....	5	5	.....	.....
Medical College of Virginia.....	.....	.....	.....	.....	.....	1	.....	1	.....
Howard University, Medical Department, Washington, D. C.....	.....	.....	.....	.....	.....	1	1	.....	.....
University of Maryland—School of Medicine.....	.....	.....	.....	.....	.....	4	3	1	.....
College Physicians and Surgeons, Baltimore.....	.....	.....	.....	.....	.....	3	3	.....	.....
Baltimore Medical College.....	.....	.....	.....	.....	.....	2	1	1	.....
*University of Pennsylvania—Medical Department.....	.....	.....	.....	.....	.....	2	2	.....	.....
University of City of New York—Medical Department.....	.....	.....	.....	.....	.....	1	1	.....	.....
Bellevue Hospital Medical College, New York.....	.....	.....	.....	.....	.....	1	1	.....	.....
University of Louisville—Medical Department.....	.....	.....	.....	.....	.....	2	2	.....	.....
Kentucky School of Medicine, Louisville (see foot-note).....	.....	.....	.....	.....	.....	1	1	.....	.....
University of Nashville and Vanderbilt University.....	.....	.....	.....	.....	.....	1	1	.....	.....
University of the South, Sewanee, Tenn.....	.....	.....	.....	.....	.....	1	.....	1	.....
Medical College of State of South Carolina, Charleston.....	.....	.....	.....	.....	.....	1	1	.....	.....
Southern Medical College, Atlanta.....	.....	.....	.....	.....	.....	1	1	.....	.....
Medical College of St. Louis (closed).....	.....	.....	.....	.....	.....	1	1	.....	.....
Rush Medical College, Chicago.....	.....	.....	.....	.....	.....	1	1	.....	.....
Hahnemann Medical College, Chicago (Homœop.).....	.....	.....	.....	.....	.....	1	1	.....	.....
Non-Graduates.....	.....	.....	.....	.....	.....	3	1	2	.....
College not given.....	.....	.....	.....	.....	.....	1	.....	.....	1
Totals.....	.....	.....	.....	.....	.....	34	27	6	1

* One of them is also graduate of Kentucky School of Medicine.

INSTITUTIONS REPRESENTED BY THE APPLICANTS

BEFORE THE

MEDICAL EXAMINING BOARD OF VIRGINIA,

FROM THE ORGANIZATION OF THE BOARD,

January 1st, 1885, to September 15th, 1892.

	Total number of applicants for examination from each institution.	Total number awarded certificates.	Total number rejected.	Incomplete examinations, withdrawn or otherwise unfinished examinations.
Medical College of Virginia	100	83	13	4
University of Virginia—Medical Department.....	65	64	1	.....
National Medical College, Washington, D. C.	1	.....	1	.....
University of Georgetown, D. C., Medical Department.....	1	1	.....	.....
Georgetown College, Washington, D. C. (name incorrect).....	1	.....	1	.....
Howard University, Medical Dept., Washington, D. C. (Colored)	18	4	14	.....
University of Maryland, School of Medicine.....	98	70	27	1
College of Physicians and Surgeons, Baltimore.....	73	53	17	3
Baltimore Medical College	15	4	9	2
Baltimore University—School of Medicine.....	5	.....	5	.....
Washington University, Baltimore, (Extinct).....	1	.....	.....	1
University of Maryland and Baltimore Medical College.....	1	.....	1	.....
Jefferson Medical College.....	29	20	8	1
University of Pennsylvania—Medical Department.....	6	6	.....	.....
Medico-Chirurgical College of Philadelphia.....	1	.....	1	.....
Medical College of Philadelphia (name incorrect).....	1	.....	1	.....
Woman's Medical College of Pennsylvania.....	1	1	.....	.....
Hahnemann Medical College and Hospital (Homœopathic), Phila.....	3	2	1	.....
University of the City of New York—Medical Department.....	24	16	8	.....
University of New York (name incorrect)	1	.....	1	.....
University of Virginia and New York.....	1	.....	.....	.....
Bellevue Hospital Medical College, New York.....	14	14	.....	.....
University of Va. and Bellevue Hospital Medical College.....	1	1	.....	.....
College of Physicians and Surgeons, New York.....	8	7	1	.....
Geneva Medical College, New York (extinct).....	1	1	.....	.....
Long Island College Hospital, Brooklyn.....	1	.....	1	.....
Yale Medical School, New Haven.....	1	1	.....	.....
University of Vermont, Burlington.....	1	1	.....	.....
Miami Medical College, Cincinnati	2	2	.....	.....
Cincinnati Medical College.....	1	.....	1	.....
Columbus Medical College.....	3	2	1	.....
Homœopathic Hospital College, Cleveland	2	2	.....	.....
Pulte Medical College, Cincinnati (Homœopathic).....	1	1	.....	.....
Louisville Medical College.....	10	4	6	.....
University of Louisville—Medical Department.....	8	5	3	.....
Kentucky School of Medicine, Louisville.....	3	3	.....	.....
Hospital Medical College, Louisville.....	7	4	3	.....
Vanderbilt University, Nashville	5	4	1	.....
University of Tennessee, Nashville.....	1	1	.....	.....
University of the South, Sewanee, Tenn.	1	.....	1	.....
Leonard Medical College, Raleigh (Colored).....	7	5	2	.....
Medical College of State of South Carolina, Charleston.....	2	2	.....	.....
Southern Medical College Atlanta.....	3	1	2	.....
Atlanta Medical College	1	.....	1	.....
Tulane University—Medical Department—New Orleans.....	1	1	.....	.....
University of Louisiana (probably Tulane University).....	1	1	.....	.....
Medical College of St. Louis (closed)	1	1	.....	.....
St. Louis Medical College, Missouri.....	1	1	.....	.....
Detroit Medical College, Michigan	2	2	.....	.....
University of Michigan—Medical Department, Ann Arbor.....	2	2	.....	.....
Michigan College of Medicine and Surgery, Detroit.....	1	.....	1	.....
Rush Medical College, Chicago.....	1	1	.....	.....
Chicago Homœopathic Medical College.....	1	1	.....	.....
Hannemann Medical College and Hospital, Chicago.....	1	1	.....	.....
University of Heidelberg, Germany.....	1	1	.....	.....
St. George's Hospital, London	1	1	.....	.....
King George Hospital, London.....	1	.....	1	.....
King College, London	1	1	.....	.....
Colleges unknown.....	7	4	1	2
Non-Graduates.....	45	15	25	5
Total Examinations and Results.....	598	418	161	19

AMERICAN GYNÆCOLOGICAL SOCIETY.

The American Gynæcological Society held its Seventeenth Annual Meeting in Brooklyn, September 20-22, 1892. Dr. E. S. McKee, of Cincinnati, makes the following partial report—

Periodical Inter-Menstrual Pain.

Dr. C. D. Palmer, of Cincinnati, had had under his care several distinctly pronounced cases. About the middle of the inter-menstrual period, attacks of pelvic pain located in either ovarian region, continued from two to nine days, uninfluenced by bodily movement; occurred sometimes on one and sometimes on the opposite side. These pains varied in severity and duration, were usually intermittent, came on at night as well as during the day, unattended by febrile phenomena. The conclusions reached by the author were: (1) Periodical inter-menstrual pain is a comparatively rare disease; (2) The disease is ovarian—not uterine; (3) It is an oöphoritis, or peri-oöphoritis, or both; (4) The chief underlying exciting cause of these attacks of pain is the morbid obstruction to the extrusion of the contents of the Graafian follicles; (5) Many other morbid conditions (uterine, peri-uterine, or ovarian) may be associated with the oöphoritis, but their presence is not the cause of the essential symptoms; (6) Cure is effected only by overcoming the disease of the ovary or by its extirpation.

The Elective Cæsarean Section: The Most Favorable Time for Operation.

Dr. Henry C. Coe, of New York, gave the histories of two successful cases operated upon by himself by elective Cæsarean section. He advocated operation before the commencement of labor, and thus summarized the advantages secured: To the surgeon—(1) After obtaining all needed counsel, he set his own time for operation during the day, and was not summoned at night to operate hurriedly by imperfect light and without his regular corps of assistants. (2) He secured the same conditions as in ordinary cœliotomy—thorough preparation of the patient, rooms, instruments, etc. (3) Since the patient was in the best possible condition, he was not hurried—slurring numerous important details so essential to success. To the patient—(1) She was spared the suspense incident upon long waiting. (2) Having been thoroughly prepared for the operation, the element of shock was reduced to a minimum, and subsequent conval-

escence more rapid and uncomplicated. (3) Asepsis was perfect. Sepsis could never be excluded under ordinary conditions, especially where labor was induced in the usual manner. The two essentials to success—early operation and perfect technique—are intimately related. The time to be chosen is near the end of pregnancy, before labor has begun. Hæmorrhage need not be feared; danger of shock is lessened and sepsis eliminated.

What is the Best Management of Occipito-Posterior Positions of the Vertex?

Dr. Chauncey D. Palmer, of Cincinnati, thought only four positions of the vertex need be recognized. Intelligent treatment of these cases implied, of course, a consideration of the mechanism of labor. A true posterior position is one in which the occiput is not only toward the sacro-iliac synchondrosis, but in which it impinged against the posterior inclined pelvic plane, just as anterior position was one in which the anterior inclined pelvic plane received the occiput in its downward movement. Many causes contributed toward directing the occiput on the anterior, rather than the posterior planes. The author said palpation of the abdomen and auscultation were as important early in diagnosis as was vaginal touch. If seen early enough, rotate the child into the anterior position. If not successful, perform podalic version. In the last stage, with mother exhausted and child dead, craniotomy offers the best chances for the mother. Forceps are properly preferred when the child is alive.

Analyses, Selections, etc.

Present Demand for Better Medical Education in the South.

In the paper by Dr. Luther B. Grandy, of Atlanta, Ga., read at the meeting of the Tri-State Medical Society of Georgia, Alabama, and Tennessee, Chattanooga, Tenn., October 25th, 1892, he states that the past twenty years have been years of unprecedented activity and progress in our art and in the sciences related thereto. The new world of bacteriology has been discovered, and is just now being developed; chemistry has received some of its most important additions; electricity, in its therapeutic relations, has been studied as never before; physiology has been revised; our therapeutics have become more rational, because we

have learned better of nature's processes and of the action of drugs; and the gospel of cleanliness that is next to godliness has created a new surgery in place of the old.

It was not only natural, but necessary, that due cognizance of this progress should be taken by the institutions which had the making of a nation's doctors. Foreign schools were quick to accomplish the idea, that they should improve their courses of instruction in accordance with the demands of a higher culture. In our own country, the Chicago Medical College was the first to cut loose from its old moorings in inaugurating, twenty-four years ago, the graded course of instruction extending over three years. From time to time other colleges (principally those of the North and West) saw the necessity of doing likewise, and the reform movement in medical education became gradually but securely established.

The main steps in this advance movement have been—

1. The lengthening of the college term up to six months or more. In 1882, the number of colleges with this length of term was 42; in 1885, it was 50; in 1890, 76; and in 1892, about 125.

2. The requirement of preliminary education. In 1882, the number of colleges requiring certain educational qualifications for matriculation was 45; in 1886, it was 114; in 1890, 124; and in 1892, about 130.

3. The lengthening of the college course up to three years or more. In 1882, the number of colleges requiring three or more courses of lectures before graduation was 22; in 1886, it was 41; in 1890, 64; in 1892, about 100.*

4. The addition to the courses of instruction of certain subjects, as hygiene, medical jurisprudence, laboratory training in normal and pathological histology, and in bacteriology, etc. Not the least important has been the requirement gradually of more and more clinical work where this was practicable.

We regret to say that the Southern colleges, as a rule, have taken too small a part in this spirit of progress. In spite of increasing demands, our curricula have remained practically the same; and though the times have changed, we have not changed with them.

* Unless otherwise stated, the statistics in this paper have either been taken from the Reports of the Illinois Board of Health for 1891 and '92, or compiled from the latest college catalogues. Allowance has generally been made for prospective regulations; that is, those which will take effect only after the current session.

There are in the United States and Canada to-day about 140 medical colleges of all kinds in active operation. Of these 101 belong to the regular profession in the United States. Five of these 101 colleges require four or more years of study and four or more terms of lectures as conditions of graduation; 21 require four or more years of study and three or more terms of lectures; 52 require three or more years of study and three terms of lectures; the remaining 23 either require three years of study and only two terms of lectures, or only a two-term attendance upon lectures without even the trifling obligation of a previous year with a preceptor.

Three evils at present exist in the majority of our Southern schools, in the presence of which it is impossible to do good work: 1. The non-requirement of preliminary education. 2. The two-term course. 3. The laxity of our final examinations.

I. *As to Preliminary Education.*—It is still too easy a matter to matriculate in most of our colleges. The applicant enters his name, refers possibly to his family physician as his preceptor, pays his five dollars, and the operation is done. All candidates are equal here, be they fresh from college halls or from field or forest. This is all wrong. The study of medicine is too difficult and responsible a task for him to undertake who is not prepared for it. The student, with no knowledge of Latin, for instance, begins his course, and possibly his first lecture is on Anatomy. He hears the Professor describe the *cervical*, *dorsal*, and *lumbar vertebræ*, with their *pedicles*, *laminæ*, *spinous* and *transverse processes*, *superior* and *inferior inter vertebral notches*, *anterior* and *posterior tubercles*, etc.; and when the tedious hour is over, the poor fellow cannot tell you the difference between the *vertebral foramen* and the *odontoid process*. The student with no knowledge of Latin cannot learn anatomy and *materia medica* except with the greatest difficulty; and neither can one study chemistry and physiology intelligently without some previous instruction in elementary physics. It is expecting too much of students not even possessing a previous high-school training, that they should be able to reach anything like an intelligent comprehension of the scientific principles involved in the practice of medicine. We cannot manufacture good doctors out of material that was designed by nature, and trained by experience, for the farm. Our attempting to do so is unjust to the "material," and only robs the farm without enriching the profession.

In England, the General Medical Council now requires of matriculates a preliminary examination in the English language, grammar and composition, Latin language, including grammar and translations from selected authors, Mathematics comprising arithmetic, algebra to simple equations, and geometry through three books of Euclid, and optionally, either Greek or Logic, or any modern language.

The Association of American Medical Colleges now demand that institutions composing it shall require of all matriculants not having a collegiate or high-school certificate of some sort, "an English composition in the handwriting of the applicant of not less than 200 words, an examination by a committee of the faculty or other lawfully constituted Board of Examiners, in higher arithmetic, algebra, elementary physics, and Latin prose." Surely this is not asking too much. This Association was organized in a Southern city more than two years ago, but how many of our Southern schools have gone into it? So far as I have been able to ascertain, only two.

There are now about 130 medical schools in this country and Canada requiring certain educational qualifications for matriculation. Of these, how many are Southern colleges? Only three. About ten colleges remain which make no effort to ascertain if the applicant is capable of receiving a medical education, and of these ten nine are in the South. In three of the best Eastern schools, whose catalogues I have examined, the proportion of college-bred men to the total number of matriculates averaged about 36.5 per cent. In Southern schools, the corresponding proportion is only 17 per cent. It may be of some comfort for us to know that in the West the percentage is even lower than this.*

II. *As to the Two-Term Course.*—The time was in the history of medical education, and within the memory of many now before me, when a few months more or less intimate association with a practicing physician, himself most likely possessing only a vague and unreliable knowledge of matters medical, and a one-term attendance upon lectures at some institution provided with the diploma-conferring power, constituted all the necessary steps in the evolution of the physician. That time is passed. It may not have been impossible in that day for a student of average capacity to master fairly well, within the period required, all that was offered him to learn. But the time that was sufficient

* Dr. John S. Billings, in *Boston Med. and Surg. Journal*, June 25 and July 2, 1891.

to acquire a medical education twenty years ago will not suffice for the broader culture that is demanded to-day. Within a given time it is impossible for a student to accomplish more than so much. The capacity and power of medical students are limited, and the stuffing process is just as incompatible with mental as it is with gastric indigestion.

Of the 78 American colleges which require three or more years of study and three terms of attendance upon lectures, 72 are located in the North and West; the remaining 6 are in the South, and 3 of these are schools for negroes. Of the 23 colleges which continue to graduate students after three years of study and two terms of lectures, or after two terms of lectures alone, 14 are in the five Southern States—Virginia, Georgia, Alabama, Tennessee, and Louisiana. The list of colleges that require only two courses of lectures, and have as yet made no provision for longer study, is now reduced to 21. Of this number, the Southern schools compose the great majority. In Italy and Switzerland, the medical course covers a period of eight years; in Denmark, seven; in Austria, Russia, and Portugal, five; in France and Canada, four; in the United States, four, three, and two. The Association of American Medical Colleges now requires that candidates for the degree of Doctor of Medicine shall have attended three courses of graded instruction of not less than six months each in three separate years. Colleges not conforming to these minimum requirements, and the faculties of the same, will not be held in good standing by the American Medical Association. Medical legislation is getting to be fashionable now, and every Legislature that meets seems to be inspired with a patriotic desire to reform something that pertains to our profession. It would appear that these things have been hidden from the wise and prudent and revealed unto babes. The Legislatures of Minnesota, Montana, North Dakota, Washington, California, Colorado, Illinois, New York, Iowa, and Oregon, have passed measures licensing to practice within their limits only those applicants who can certify to attendance upon three full courses of lectures of six months each—who can present a diploma of a three-term college.* There is no question that other States will, sooner or later, adopt similar legislation. Even in the Legislature of Georgia last year there were a few feeble and flickering signs of activity in this direction over a bill requiring the medical colleges of the State to adopt the three-year's course.

* Dr. Geo. J. Engelmann, in *Medical Fortnightly*, April 15, 1892.

Without attempting to make any comparisons, we may say that possibly the four best schools in the United States are the Harvard Medical School, College of Physicians and Surgeons (New York), University of Pennsylvania, and the University of Michigan. Yet three of these now require four years of college attendance, and the other is preparing to do so. If these colleges, with their superior teaching facilities, their excellent laboratory equipments, and their abundance of dispensary and hospital material, will not declare a student prepared to practice until he first proves his capacity to begin, and then spends four years in study and observation, what shall be said of those institutions, with their meagre (relatively) opportunities, which, without question, receive all applicants that come, and, after two short terms of study, send them back to their constituents endorsed with the great seal as duly qualified physicians? To make the nurse in our ordinary training schools, the term of instruction is usually two or more full years of constant, and oftentimes laborious, work, day in and day out; to make the physician or surgeon, who is above nurse and everybody else at the bedside, requires only two terms of study of five or six months each. There is something wrong here.

Before the Examining Boards of Alabama, North Dakota, North Carolina, Virginia, and Minnesota, there have been 1,950 examinations for license to practice medicine. The total percentage licensed was 75.2 per cent. Of 183 graduates of colleges requiring three courses of instruction for the degree, 179 were accepted; 4 were rejected; and percentage passed, 97.2. Of 435 graduates of colleges that formerly issued degrees after attendance upon two courses of lectures, 343 passed the examinations; 92 were rejected; percentage passed, 78.8.*

It has been well and truly said by a recent writer that those of the profession now in practice who received their degrees after attendance upon but two courses of medical instruction, "now look back upon their medical college career as an unimportant epoch, and think of those days as a work of confusion. The instruction afforded by this system of medical education was hurried, superficial, and most inadequate to our wants, the course consisting rather in calling the attention of the student to the art of medicine, instead of teaching him the sound principles upon which is governed the great field of active practice."†

* Dr. P. H. Millard, in *Medical News*, July 30, 1892.

† *Idem*.

Here is the testimony of a distinguished American physician who has been honored at home and decorated abroad for his contributions to scientific medicine and sanitation:*

"Thirty-three years ago I began the study of medicine, having obtained the degree of Bachelor of Arts after the usual classical course of those days. The smattering of Latin and Greek which I had obtained was of great use to me, and I may, therefore, be a prejudiced witness; but my acquaintance with many physicians at home and abroad, has led me to believe that the ordinary college course in languages, mathematics, and literature, is a very good foundation for the study of medicine. I had attended lectures in physics and chemistry, but had done no laboratory work, and I could read easy French and German. Thus equipped, I began to read anatomy, physiology, and the principles of medicine. Nominally I had a preceptor, but I do not think I saw him six times during the year. Nevertheless he told me what books to read, and I read them. The next thing was to attend the prescribed two courses of lectures in a medical college. Each course lasted about five months, and was precisely the same. There was no laboratory course, and I began to attend clinical lectures the first day of the first course. One result of this was that I had to learn chemical manipulation, the practical use of the microscope, etc., at a later period when it was much more difficult. In fact, I may say, that I have been studying ever since to repair the deficiencies in my medical training, and have never been able to catch up." It may now be pertinently asked, wherein does the course which he pursued thirty-three years ago differ from that now followed by students in the majority of our Southern Colleges?

III. *As to Final Examinations.*—The requirements at the close of our sessions would seem to be hardly more difficult than those at the beginning. In consideration of the fact that many States now have Examining Boards before whom the graduates of the colleges must appear, would it not be to the interest of the colleges to send out only such men as are well qualified? They would at least be spared the humiliation of seeing large numbers of their graduates rejected. Again, in consideration of the fact that many States as yet have no Examining Boards, but accept a diploma as a license, what becomes of the duty which a college sustains to the people when it sends into an unprotected com-

* Dr. John S. Billings, *Op. cit.*

munity one or more men totally unfit to practice? It is easy to conceive when a little learning may be a dangerous thing in medicine or surgery. A graduate of one of our Southern colleges that stands as well with us, I am sorry to say, as any other, made a record before the Virginia Examining Board last April of 85 per cent. on Surgery, 78 on Materia Medica, 65 on Practice, 50 on Physiology, 50 on Chemistry, 35 on Hygiene and Medical Jurisprudence, 34 on Anatomy, and 33 on Obstetrics. Before the same Board, graduates of other colleges, North and South, made some shamefully low averages. One man made only 54 in Chemistry, 53 in Physiology, and 52 in Anatomy; another, 38 in Anatomy, and 30 in Physiology; another 25 in Anatomy; another 22.* And yet, all these men had medical college diplomas. In many of the colleges from which these graduates come, their deficiencies in one or two branches are allowed to be compensated for by unexpected excellences in others. Thus a student who attains only 50 per cent. in Surgery and Obstetrics may be passed on account of his good marks in Chemistry and Materia Medica; but, we may ask, does his superior record in the latter attest his ability to reduce a dislocation or manage a natural or unnatural labor? One trouble is, that professors in the regular faculties do not know their students well enough to learn their deficiencies. It is the assistant instructors who make the demonstrations in the different departments, conduct the college quizzes, and are in daily touch with the student body that are in position to know that many of them do not earn their diplomas—in fact, have no right to them. But these same assistants have no voice in the final acceptance or rejection of candidates for graduation. The man who in two years time has not learned better than to say that the foramen magnum transmits the arch of the aorta has no right to a diploma. But such a man is now at large somewhere rejoicing in the possession of a degree bestowed upon him by one of our colleges.

The Association of American Medical Colleges, after a somewhat checkered career, held its third annual session in Chicago last summer, and two-thirds of the medical schools of the country were represented. The South was not there. This incident excited the following comment in a popular Northern journal (*Medical Record*): "We trust that our brethren in the South will appreciate the situation: Their

* Report of Virginia Medical Examining Board for first session of 1892.

colleges are confessedly poor, and there can be no advance because the cheaper ones outbid the others. Southern physicians are sensitive to the imputation of commercialism, and they are justly proud of their capacity and resources as educators. We trust that they will speedily take means to correct the opinion which must now be frankly expressed, that Southern medical colleges are cheap colleges, not necessarily because they are inferior in equipment, but because they are low in their requirements."

Every department in a medical course should presuppose, as a condition requisite, a reasonable amount of education in the English essentials, and yet we are yearly making doctors of those who cannot write a correct English sentence. Those in this audience who conduct college correspondence will bear me out in that statement. Any medical course that makes any pretention to thoroughness is now comprehensive enough to make it impossible for a student of only average attainments to obtain a safe-working education in two terms of six months each, and yet two-thirds of our Southern schools require no more; some do not require that much. What sort of doctors are we to expect? The degrees of all American colleges, except those of the United States are recognized and honored in Europe. For our diplomas is reserved the statement that appears in a recent work on Medical Education published in Vienna; after speaking of the inefficient instruction in our schools it says: "It is, therefore, not a matter for surprise that American degrees in medicine should be regarded with distrust in Europe, and placed in the same category as those aimable, but meaningless distinctions which are conferred on people dancing the cotillion."*

There was a time when medicine was the most learned profession next to the priesthood. The title *Doctor* was then given not to those who practiced medicine and surgery, but only to the limited few to whom it was permitted to enter the Holy of Holies of classical and scientific learning. By extension, the term came to be applied also to the followers of the healing art, the exigencies of whose calling demanded a degree of knowledge second only to that of the monks in the monasteries. With the profession and the colleges rests the keeping of our ancient prestige. Let us see that none of it is lost.

We, as medical men, sometimes take a pride in saying

**History of Medical Education from the Most Remote to Recent Times.* By Dr. Theodor Puschmann.

that it is not all of practice to make money; so let it be said of our colleges. Instead of that mercantile spirit of competition which seeks to catalogue the greatest number of students, there should be an unselfish spirit of rivalry in giving those students that come the most useful and thorough preparation for their life-work. The college that best succeeds in doing this will not want for patronage; but will quickly achieve the honorable distinction of giving the greatest good to the greatest number.

Simultaneous Occurrence of Fibro-Myoma and Carcinoma of the Uterus.

Ehrendorfer (*Archives fur Gynekologie*, according to some notes sent us on Obstetrics and Gynæcology by Dr. E. S. McKee, of Cincinnati, O.,) says that a marked increase in cases in which carcinoma and myoma have occurred simultaneously, are shown by a review of the literature of the past few years. He affirms that the climacteric is not always attended with an arrest of growth and subsequent shrinking of fibro-myomatous tumors. The history of four cases where fibroids and carcinoma were found in the uterus and operated by different methods were given. The author thus gives his conclusions: (1) The simultaneous occurrence of fibro-myoma, is more frequent than has been thought hitherto. Hence the significance of this combination must receive more attention in the future. (2) In every extirpation of fibro-myoma, before the pedicle is taken care of, an examination should be made to ascertain if carcinoma also exists. (3) If fibro-myoma is complicated with carcinoma, or if well founded suspicion of carcinoma, the whole uterus must be removed. (4) In carcinoma of the uterine body, no treatment of the pedicle following hysteromyomectomy, even thorough cutting out and burning the cavity of the stump, will guarantee no recurrence. A recurrence is usually hopeless and irremediable. (5) In fibro-myoma of the uterus, when a copious, watery, or discolored discharge, or profuse hæmorrhages, with labor-like pains set in, especially at the climacteric period, the suspicion of a simultaneous malignant affection of the endometrium is justified. In these cases palliative treatment is not to be entertained if an operation be feasible. (6) Extensive experience in the future will ascertain if carcinomatous degeneration of the body of the uterus occurs more frequently when fibro-myoma is present than when it is not. What

has been said is particularly applicable to sarcoma, although relative to carcinomatous growths.

Twenty-five Cases of Extirpation of the Uterus for Cancer—A Consideration of Ultimate Results.

Dr. Charles A. L. Reed, of Cincinnati, presented to the recent meeting of the American Association of Obstetricians and Gynæcologists, a report of twenty-five cases of complete vaginal extirpation of the womb for cancer with only two primary deaths—one from shock and one from iodoform poisoning. Of the twenty-five operated upon, but fourteen were of more than two years standing, and hence were all that could be discussed with reference to their ultimate results. These fourteen were divisible into two classes of seven each, viz.: those in which the disease had existed for more than six months before the operation, and those in which it had existed for less than six months before the operation. Of the first class, *i. e.*, those of more than six months (an average of 10 + months) previous duration, all were dead; of the second class, *i. e.*, those of less than six months (an average of 4 + months) previous duration, only one has since died. One of the recoveries is of more than five years duration. The conclusion from these figures is that cases of cancer of the uterus ought to be remanded for operation as soon as diagnosed. Dr. Reed looks upon total extirpation as the only operation to be advised or practiced in these cases, the primary mortality from which, in experienced hands, varies from 5 to 8 per cent.

Book Notices.

Treatise on Hygiene and Public Health. *Edited by* THOMAS STEVENSON, M. D., F. R. C. P., Lond. Lecturer on Chemistry and on Medical Jurisprudence at Guy's Hospital, Official Analyst to the Home Office; and SHIRLEY F. MURPHY, Medical Officer of Health of the Administrative County of London. *Assisted by about Twenty five Contributors* Two Volumes, Octavo, with many Illustrations and Plates. Vol. I. Pp. 1013. Philadelphia. P. Blakiston, Son & Co. 1892. Handsome Cloth, \$7.50 per volume.

This great work supplants in range of subjects and the thoroughness of their discussion any publication relating to

such matters that has issued from the press. The titles of articles in the first volume—each by an author of recognized ability—refer to air, warming and ventilation, meteorology, water, influences of climate and soil on health, food, meat inspection, clothing, physical education, baths, the dwelling, disposal of refuse, offensive businesses, and slaughter-houses. Vol. II, now about ready, will discuss the pathology, etiology, natural history and prevention of infectious diseases, vaccination, ship and military hygiene, disposal of the dead, vital statistics, duties of medical officers of health, and sanitary laws. The article on “Physical Education”—some 70 pages—has been separately and handsomely issued at \$1.25; and as it is the best monograph existent on a subject that is now attracting so much general attention, it should be generally read. As Mr. Frederick Treves, F. R. C. S., is author of this monograph, it is not needed to speak of its special qualities that recommend it to every interested person. Since it is so often the case that health officers are selected by political friends, because they are unable to succeed in other departments, and hence limited in purse, and as the completeness and thoroughness of the *Treatise* before us compels a price in excess of the means of many of such officers, each State, county, town, or village having a health department, should purchase one or two sets for its library, in order that the health officers may not have excuse for being so generally ignorant of their science as they so often prove themselves to be. The only criticism we could pass on this invaluable *Treatise*, is that here and there we see the lack of an American editor to adapt the general text to American customs and surroundings.

Diagnosis of Diseases of the Nervous System. By CHRISTIAN A. HERTER, M. D., Physician to the Class of Nervous Diseases, Presbyterian Hospital Dispensary. G. P. Putnam's Sons. New York. 1892. 12mo. Pp. 628. Cloth. Price, \$3. (For sale by West, Johnston & Co., Richmond).

This is one of the most useful of recent additions to the practitioner's library. Advances in knowledge as to the functions of various parts of the brain and nervous system have been so marked and so rapid that the introductory chapter on the structure and functions of the nervous system is really very serviceable. The translation of the various symptoms occurring in nervous diseases is made compara-

tively easy by the excellent description of localizations of brain and nervous centres, and enables the practitioner to trace effect to cause in a much more satisfactory way. We know of no book relating to a fundamental study of the diseases of the nervous system that is more valuable to the student or general practitioner than this one.

Gonorrhœa and Urethritis. By G. FRANK LYDSTON, M. D., Professor of Surgical Diseases of Genito-Urinary System and Syphilology, Chicago College Physicians and Surgeons, etc. 1892. George S. Davis. Detroit, Mich. 12mo. Pp. 216. Paper, 25 cents; Cloth, 50 cents. (From Publisher.)

Beside the special value of this number of the "Physician's Leisure Library," as a work that presents the result of the latest researches and the practical lessons learned by a practitioner of large opportunities and eminent ability on the subjects given in the title, we cannot help giving expression to our appreciation of the marked courtesy shown by the author in dedicating his work to the most distinguished of living surgeons in the South. The dedication reads: "To Hunter McGuire, M. D., LL. D., Late President of the Southern Surgical and Gynæcological Association, President of the American Medical Association, whose brilliant record as a Surgeon and Medical Director in the Confederate Army has been equaled only by the enviable reputation he has acquired in the North in later and more peaceful years, this little volume is respectfully dedicated as a tribute of friendship and esteem, and in memory of pleasant hours of scientific discussion and social intercourse, by the Author."

Editorial.

The Southern Surgical and Gynæcological Society

Will hold its Fifth Annual Meeting in the city of Louisville, Ky., November 15, 16, and 17, 1892, under the Presidency of Dr. J. McF. Gaston, of Atlanta. Members of the medical profession are most cordially invited to attend. We have assurances that the session will be largely attended; while the following partial list of papers to be presented show that the scientific proceedings will be specially attractive:

President's Annual Address—Dr. J. McFadden Gaston, Atlanta, Ga.

Cervicitis; also Personal Recollections of Dr. Benjamin W. Dudley and his Surgical Methods—Dr. Bedford Brown, Alexandria, Va.

Surgical Treatment of Endometritis—Dr. A. Vander Veer, Albany, N. Y.

Experiences in Pelvic Surgery—Dr. A. V. L. Brokaw, St. Louis, Mo.

Craniotomy Upon the Living Fœtus is Not Justifiable—Dr. Cornelius Kollock, Cheraw, S. C.

Case of Extensive Hematocele Resulting from Tubal Pregnancy Rupturing into the Broad Ligament—Dr. W. D. Haggard, Nashville, Tenn.

Fibroid Tumor of Uterus—Pregnancy—Rupture at Fourth Month—Operation Six Weeks Afterwards—Death—Dr. S. M. Hogan, Union Springs, Ala.

Contribution to the Study of Abdominal Pregnancy—Dr. H. C. Coe, New York City.

Tubal Pregnancy—Dr. Joseph Price, Philadelphia, Pa.

Some Kidney Operations, with Remarks—Dr. Geo. Ben. Johnston, Richmond, Va.

Surgical Treatment of Inguinal Hernia in the Male—Dr. Henry O. Marcy, Boston, Mass.

Symptoms of Fractures—Their Importance and Significance—Dr. W. C. Dugan, Louisville, Ky.

Part that Rectal Diseases Play in Women—Dr. J. M. Matthews, Louisville, Ky.

Poisoning by the Bite of the Southern Spider—Dr. J. T. Wilson, Sherman, Texas.

Plea for More Rapid Surgical Work—Dr. Ap. Morgan Vance, Louisville, Ky.

Specialism as Related to the Practice of Gynæcology—Dr. Wm. Warren Potter, Buffalo, N. Y.

Relation of the General Practitioner to Gynæcology—Dr. R. M. Cunningham, Birmingham, Ala.

Morphology of Abdominal Tumors—Dr. Howard A. Kelly, Baltimore, Md.

Modern Researches in Relation to the Surgery of the Genito-Urinary Organs—Dr. G. Frank Lydston, Chicago, Ill.

Amputation of Breast for Malignant Disease—Dr. H. Horace Grant, Louisville, Ky.

Fecal and other Fistulæ Following Abdominal Section—Dr. Joseph Taber Johnson, Washington, D. C.

Nature of Shock and Allied Conditions—Dr. William C. Dabney, University of Virginia.

Present Status of Drainage in Surgery—Dr. A. Morgan Cartledge, Louisville, Ky.

Cholecystotomy, with the Report of a Case—Dr. Edwin Ricketts, Cincinnati, Ohio.

Treatment of Stones in the Biliary Ducts—Dr. W. E. B. Davis, Birmingham, Ala.

Intestinal Anastomosis without Mechanical Devices—Circulo-Lateral Enterorrhaphy—Dr. J. D. S. Davis, Birmingham, Ala.

Papers are also promised—Drs. Geo. H. Noble, Atlanta, Ga.; W. L. Robinson, Danville, Va.; W. Gill Wylie, New York City, etc.

W. E. B. Davis, M. D., of Birmingham, Ala., is the Secretary, to whom so much of the success of this organization is due.

Ex-President Dr. L. S. McMurtry, of Louisville, is Chairman of the Committee of Arrangements.

Convention of Representatives of Southern Medical Colleges.

A note from Drs. W. T. Briggs and G. C. Savage, of Nashville, Tenn., dated October 16th, 1892, reads: "Having received favorable responses to a letter addressed to all Southern Medical Colleges, we are authorized by them to say that a convention of their representatives will be held in Louisville, Ky., November 16th, 1892, for the purpose of considering the question of a higher standard of medical education." We most cordially approve this call, and trust that all interested will carefully read the paper by Dr. Grandy on a Plea for Higher Medical Education in Southern Colleges, etc., which is the leading article in department of "Analyses, Selections, etc.," in this issue of the *Monthly*.

Morris' Anatomy.

Messrs. P. Blakiston, Son & Co., of Philadelphia, announce this new systematic text-book on Anatomy for early publication. It is prepared by ten of the foremost of English anatomists. It will be a book of about 1,100 octavo pages, containing about 600 illustrations—many of them in colors. The price will be from \$6 to \$8 in cloth and leather bindings.

Clinical Society of Maryland.

During the Two Hundred and Sixty-ninth regular meeting (President, Dr. Robt. W. Johnson,) in its Hall in Baltimore, Md., Oct. 7th, 1892, the reports of the Treasurer and Finance Committee showed the Society to be in a flourishing condition financially. The following officers were elected for the ensuing year: *President*, Dr. Wm. E. Moseley; *Vice-President*, Dr. J. Mason Hundley; *Corresponding Secretary*, Dr. Edwin K. Ballard; *Finance Committee*, new member, Dr. George H. Rohé; *Executive Committee*, Drs. Geo. Flemming, J. M. T. Finney, Harry Friedenwald. Dr. W. T. WATSON, *Secretary*, 1519 Broadway, Baltimore.

American Orthopedic Association—Officers-Elect.

At the recent meeting the following officers were elected for the ensuing year: *President*, Dr. A. J. Steel, St. Louis; *Vice-Presidents*, Drs. Samuel Ketch, New York; Arthur J. Gillette, St. Paul; *Treasurer*, Dr. A. B. Judson, New York; *Secretary*, Dr. John Ridlon, 34 Washington street, Chicago.

Resident Physician Wanted at "Retreat for the Sick," Richmond, Va.

Until March 31st, 1893, a Resident Physician is needed at this Institution, which has done so much good. Applications, with proper credentials, should be forwarded at once to Mrs. Wm. A. Jenkins, President Board of Managers, etc., Richmond, Va.

Medical and Surgical Society of the District of Columbia.

Officers-elect for the session of 1892-'93: *President*, Dr. J. Wesley Boveé; *Vice-President*, Dr. F. T. Chamberlin; *Secretary and Treasurer*, Dr. Llewellyn Eliot, 1106 P street, N. W.; *Executive Council*, Drs. F. B. Bishop, Johnson Eliot, L. K. Beatty, E. L. Morgan, and Llewellyn Eliot.

Turkish Baths, etc., at Dr. White's Sanitarium.

The provisions for Turkish and other Baths at the Sanitarium of Dr. Isaiah H. White, 115 East Franklin Street, Richmond, Va., are complete. It is a special convenience to the citizens of Richmond, etc., to have the privileges of these Baths. Hours for gentlemen, 7 to 9 A. M. and 3 to 10 P. M.; for ladies, 9 A. M. to 3 P. M. Tickets, \$1. Six tickets, \$5.

Forty Years a Doctor.

We are pleased to see the many complimentary notices in foreign as well as home journals of the Address delivered by Dr. Wm. W. Parker, of this city, before the Society of Alumni of the Medical College of Virginia, and published in the June number, 1891, of this journal. No truer man nor more experienced physician could have been the author of such a paper, every line of which reads as a romance, and every sentence points a moral. We wish the advice of the *London Lancet* would be followed by those in and entering the profession—read every word of the Address and let its teachings serve as lessons to guide the practitioner in his daily rounds.

Stearns' Cascara Aromatic

Is a most serviceable aromatic sweetened fluid extract of cascara sagrada. The bitter principle—being without laxative or desirable therapeutic properties—is entirely eliminated. Dose, from a half to one teaspoonful two or three times a day alone, or in varying combinations to suit special needs. It is not to extol the virtues of this drug—now universally appreciated in cases of chronic constipation, etc.—that we make this note; but to call attention to this nice, palatable and excellent preparation of Messrs. Frederick Stearns & Company.

Messrs. Stevenson & Jester's Advertisement

Was issued last month on advertising page 35, not in the exact form desired by this reliable firm. Their *Couma* is something new and useful in daily practice. It is "a good thing."

Obituary Record.

Dr. James H. Morgan

Died at his home near Hollins, Va., September 30th, 1892, after an illness of several months. He was Local Surgeon of the N. & W. R. R. until his health compelled his relinquishing practice in Roanoke, Va. He joined the Medical Society of Virginia in 1891, and attended the session in Lynchburg. He was about 25 years of age.

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Original Communications.

ART. I.—Ovariectomy with Complications—A Clinical Lecture.

By ALEX. J. C. SKENE, M. D., of Brooklyn, N. Y.

PROFESSOR OF DISEASES OF WOMEN IN LONG ISLAND COLLEGE HOSPITAL, ETC.

I have endeavored, as far as possible, to follow up the history of the cases that I have presented and operated upon before you, in the hope of making your instruction in each case more complete; and in following out this plan, I wish to call your attention to a patient that you saw first about three weeks ago. She was then suffering from an ovarian cystoma, and gave the following history:

Age 64 years; had been married and had had several miscarriages, but never a living child. She had passed the menopause years ago, and enjoyed fairly good health until one year ago, when she began to suffer from pelvic and abdominal pain. Some months afterwards the abdomen began to enlarge. This abdominal enlargement progressed regularly up to the present time, and during the past year she has had several attacks of acute abdominal pain, which prostrated her and disturbed her digestive organs, causing nausea and vomiting. The pain during the first attack was on the left side, and at the next attack on the right. In short, she gives a history of the development of an ova-

rian cystoma, with repeated attacks of circumscribed peritonitis, which, no doubt, has given rise to adhesions.

You remember I called your attention to the size and shape of the tumor as observed through the abdominal walls; and that, while in about half of it clear fluctuation was evident, the lower half, as examined by abdominal palpation and vaginal touch, appeared to be solid or semi-solid. The fixation also of the tumor was shown by our inability to move it in any direction, which we accepted as evidence of adhesion of the tumor to the abdominal walls, especially on the sides, and also adhesions deep down in the pelvis. The physical signs then of adhesions coincided with the history of the attacks of circumscribed peritonitis which she had in the past. As the peritonitis had occurred six or eight months ago, and the fixation of the tumor was decidedly well-marked, it was predicted that the adhesions would be firm and difficult to manage.

This, and the fact of the tumor being solid, led us to anticipate that its removal would not be by any means easy. Our anxiety on this score was increased by the general condition of the patient. She was prematurely old in appearance, or as it is sometimes stated, her real and apparent age disagreed to her disadvantage. We carefully investigated the condition of her vital organs, and found her free from pulmonic or cardiac disease. The kidneys also appeared to be doing their duty well, and the digestive organs, as indicated by appetite, condition of the bowels, and character of the discharges, were in fairly good condition. In spite of all this, her ultimate nutrition was evidently exceedingly poor. She was emaciated, her skin was dry and wrinkled, and she was weak and easily fatigued.

Being unable to account for her malnutrition upon the ground of any appreciable disease of the nutritive system, I suspected that there might be some suppuration going on in the tumor, and that she was suffering from a mild form of sepsis, but the temperature and pulse argued against this.

While she was not at all in good condition to undergo a

formidable operation, we could see no ground for hoping that we could improve her condition very much, and yet felt it our duty to give her the only chance for relief by ovariectomy. She came into the hospital and was put under preparatory treatment, which did not seem to improve her strength or condition; so we reluctantly operated two weeks ago—as you remember—anticipating many difficulties.

While she was taking her ether, and my associates were cleansing the abdomen by bathing and using disinfectants, I went to see if she was sufficiently anesthetized and ready for me to begin. At a glance I noticed that a change in the shape of the abdomen had taken place, which indicated without doubt that the main cyst had ruptured then and there, thus adding to our already all-sufficient complications, another exceedingly grave one. Fortunately we were able to begin the operation, as she was then about completely anesthetized.

Upon making the incision in the abdominal wall, we found adhesions which were by no means easily separated from the collapsed cyst. It was also observed that most of the cyst wall was necrosed, which accounted for the rupture which had taken place. After emptying the abdomen of the escaped fluid, which was of the usual coffee color, the empty cyst was extracted, after being freed from its adhesions. It was then found that the remaining portion of the tumor, which was considerably larger than an adult head, was composed of a vast number of very small cysts with intervening fibrous-looking tissue, which made really a solid mass, which could not be reduced in the ordinary way by tapping or breaking down the material. This necessitated making a longish incision in order to bring out the tumor. When the tumor was brought out, we found that it was adherent pretty well down in the pelvis, and quite an effort was necessary to raise it up so as to reach the most dependent portion. It was then found that the tumor was scarcely at all pedunculated, but was firmly adherent to the sac of Douglas and to the broad ligaments. An elastic ligature was passed around and tightened, and the wall of the tumor divided all around about two inches above the constricted ligature, and that part of the tumor enucleated.

This enabled me to form a pedicle as it were, which I was able to ligate. After this, I found that the dependent portion of the sac of Douglas was drawn up to the superior pelvic strait, and the constriction made by the strong elastic ligature, had torn the right broad ligament, so that from this point there was very free venous hæmorrhage, which was controlled in part by the sponges packed in after the tumor was brought out. I found on inspection that the bleeding vessels were right over the common iliac artery and vein, and just over the ureter. In order to seize the bleeding points without including any of these other structures, I guarded the artery and vein with one finger, and pushed the ureter out of the way with the other, while with the compression forceps I seized the bleeding vessels, and with the Keith forceps passed a ligature under them and ligated them. In the first ligature all the bleeding vessels were included except one, which was subsequently seized with the forceps and tied. By this time all oozing from the separated adhesions had mostly subsided. The peritoneal cavity was cleansed by sponging.

I mention this, especially, because it is the practice of many surgeons now, under such circumstances, to wash out the peritoneal cavity with warm water, but I have always maintained, that if you have a large wound and can reach the parts conveniently, you can with clean, warm sponges cleanse the parts more quickly, and I think as thoroughly as you can with washing out with water; and as in this case I had no time to lose, I preferred the old way of cleansing the peritoneum. The patient was showing some signs of weakening, and so I had to make all haste.

I may say here that those who wash out the peritoneal cavity claim that while you may lose a little time doing that, the patient rallies from the contact of the warm water, and so you relieve the shock or avoid it to some extent. I am perfectly satisfied that the same stimulating effect, or at least the avoidance of producing more shock, can be accomplished just as well with warm sponges as with warm water, and hence my adoption of the method employed in this case.

Owing to the obliteration of the sac of Douglas, I found it rather impossible to introduce the Keith drainage tube,

which I usually employ; so I adopted the method of Peaslee, and put in a pledget of sterilized gauze at the lower angle of the wound. The wound was dressed in the usual way, and the patient was put to bed in a fair condition, considering what she had gone through.

I have mentioned all these points in the operation, believing that, although you saw all that I did, you may not have clearly comprehended just what I was doing, and why I operated in the way that I did; for you remember that I had no time to make explanations while operating if I carried my patient through safely. The whole operation occupied three-quarters of an hour, and there was not a moment that I could spare for description.

I may say that to-day, two weeks from the time that you last saw the patient, she is remarkably well, and her recovery, I am confident, is fully assured.

A few facts regarding the after-treatment will be of interest to you. She was put into a warm bed and warmth applied to the head, which I believe is one of the most valuable ways of preventing or overcoming shock—*i. e.*, to stimulate the brain-centres in this way; then she was given hypodermically one-eighth grain sulphate of morphia and $\frac{1}{200}$ grain sulphate of atropia. Morphine, I believe, is the best sustaining tonic in cases of shock in surgical operations. She was given hot water in small quantities for the first twenty-four hours. On the second day she was given liquid beef peptonoids—1 drachm every two hours—alternated with hot water. Four hours after the operation, her pulse was 128 and temperature 100° . Her pulse for three or four days kept fluctuating between 120 and 140. Her temperature never went above $101\frac{2}{3}^{\circ}$. On the 23d, she was given sulphate of sparteine, one-eighth grain, at intervals of three hours, this for twenty-four hours; then the same dose at intervals of six hours the following twenty-four hours—when it was discontinued.

The gauze drainage was removed at the end of the first twenty-four hours, the deep sutures on the seventh day, and

the superficial sutures on the twelfth day, when the wound was strapped with adhesive plaster.

Two weeks after the operation, she called my attention to a little hard mass in her right breast, which I found to be a carcinoma—a fact that, no doubt, in part accounted for her condition of malnutrition. I have noticed in those cases where the sac is necrosed, that they show evidences of malnutrition, which is probably somewhat of a septic character, although not attended with any elevation of temperature; and no doubt the two together accounted for her ill-nourished condition.

ART. II—Ovariectomy in Old Women *

By JOSEPH TABER JOHNSON, M. D., of Washington, D. C.

A distinguished abdominal surgeon from across the sea remarked some six years ago, that the last thing had been said about ovariectomy—the fair inference being that under his wise teaching, and that of others associated in the work, this operation had reached such a state of perfection that there remained nothing more to be said.

Questions in regard to the incision, the management of adhesions, injuries to the viscera, the treatment of the pedicle, irrigation and drainage, the best manner of closing the wound and the after treatment, had all been thoroughly discussed and apparently settled.

These burning and restless questions, however, refuse to remain settled. Already the position of the patient during operation is changed and that of Trendelenburg adopted by some.

The toilette of the peritonæum, so strenuously insisted upon six years ago, is now disregarded, so far as leaving large quantities of water, bland fluids from tumors ruptured in the process of removal, and blood, in the abdominal cavity, in the confident expectation that the peritonæum

*Read before Southern Surgical and Gynæcological Association in Louisville, November 16, 1892.

will absorb them without detriment to the patient. The glass drainage tube is used less frequently, and gauze packing is taking its place; so that the last word does not seem to have been said yet in regard to this wonderful operation.

It was not very long ago that patients over sixty years of age were considered too old to withstand the shock of ovariectomy, and in some instances within my own knowledge, and in one case by my advice, a large tumor was not removed simply on account of the patient's advanced age.

With more rapid methods of operating, less handling of the viscera, and less time spent in sponging the abdominal cavity, these aged women have within the last few years been safely and successfully operated on. Shock has been prevented by rectal injections of nourishment and stimulants, subcutaneous injections of digitalis and whiskey, hot bottles in the bed and to feet, and along the sides of the body.

In the three cases which I have the honor to report, and which form the basis and excuse for this short paper, I am quite sure, prolonged anæsthesia and manipulation within the peritonæal cavity would have proved fatal.

Case 1.—In November, 1887, a lady, aged sixty-seven, was sent to my service, in Providence Hospital, by Dr. W. D. Hughes, with a very large abdominal tumor, which had been diagnosed and treated for everything else but a cyst of the ovary. She came in a wagon in a recumbent position, and was in such a bad condition that her friends expected her to die. In their sad adieux they gave her and us to understand that they were seeing her for the last time in this world. The consulting staff gave me a reluctant consent to operate, thinking that she would die anyway, and the operation would do little harm. I got her in as good condition as possible, provided all known means of resuscitation, and operated. Fortunately there were few adhesions; the tumor weighed fifty two pounds, and was one-third solid. The incision was unusually long, but was quickly made, the cyst tapped, delivered, the pedicle quickly ligated, and the patient taken back to bed in less than half an hour. Rectal enemata of hot beef tea and whiskey were given at once, and repeated several times during the day. There was little shock and the plucky old lady made an

unusually rapid recovery. She was alive and doing well when I last heard from her.

Case 2.—In September, 1889, Dr. Lincoln, of my city, requested me to see an old lady with him, who had been tapped several times, and whose physicians had informed her that she was too old and feeble to stand another tapping, and nothing more could be done. She had been told from the first that she was too old to withstand the effects of an operation, that medical science could only afford temporary relief by drawing off the fluid. The tumor was never half emptied, and rapidly refilled. Dr. Lincoln was requested to take charge of her as a general surgeon. He made a correct diagnosis of a multilocular ovarian tumor, and requested me to operate.

She was not in condition to be taken to my private hospital, and I consequently operated in her own room. The tumor weighed sixty-four pounds. The patient was sixty-eight years of age. She made a good, though rather slow recovery, and is to-day holding the position of matron to the hospital of the Soldier's Home at Hampton, Va.

On October 10th of this year, I removed an ovarian tumor, weighing fifty-six pounds, from a lady in my private Sanatorium, who was sixty-seven years old, but who looked to be a hundred. This tumor had been tapped nine times in the last eighteen months, and fully four hundred pounds of fluid drawn away. The last three tapplings had been less than a month apart, and the operation was done ten days from the last tap. This patient had been solemnly informed by several physicians, nurses, and by many friends, that the knife in her case meant sure and speedy death, on account of her advanced age and general debility. She had been especially impressed with the belief that she would never leave the operating-table alive. She and her family, acting upon these assurances, had steadfastly and emphatically refused all surgical aid. My appeals and arguments were listened to with impatience and incredulity, until I was finally looked upon as a blood-thirsty ghoul, and implored never again to mention the blood-curdling subject. I was induced, against many protests, to tap this lady five times, and Dr. Graham drew off the fluid four times.

The patient finally made up her own mind to have the tumor removed, and came to my hospital in October for that purpose. She has disappointed her many friends and physicians by making a splendid recovery. She had no shock from the operation, which was completed inside of twenty

minutes—her only suffering being from wind colic and an abscess in her arm, from the effects of a hypodermic of whiskey given by Dr. Graham during the operation.

When this good lady realized that she had passed safely through the dreaded peril of the deadly knife, she developed a remarkable courage. I think her firm determination to get well was of great service to her. The only anxiety she caused me was on account of a troublesome diarrhœa, which, however, she stated had been her enemy for thirty years, and she was fully determined not to give up the ship for so slight a storm when she had just weathered a gale of such magnitude. She went home just a month from the date of the operation, and bids fair to live for many years to come.

As I stated in the beginning, nearly everything has been said which can be said upon this thoroughly discussed subject of ovariectomy, and my only excuse for taking up a moment of the valuable time of this Society is to add my plea in favor of the old ladies, whom some yet in the profession and many out of it, still fear to trust to the kindly knife of the abdominal surgeon.

I beg to add to this short and practical paper a table showing the results of ovariectomy upon thirty-eight women over sixty-seven years of age—twenty-five of this number are between seventy and eighty, and one successful case by Dr. Homans, of Boston, being eighty-two years of age. In this table of thirty-eight cases, all over sixty-seven years of age, there were only two deaths—giving a mortality as low as many good operators have obtained in cases taken as they come—young and old, great and small. By way of comparison, I have also added a table of twenty-four cases, compiled from the record of one thousand ovariectomies prepared by Dr. Spencer Wells, between the ages of sixty and sixty-eight, in which there were six deaths.

Improved methods, quicker operations, antiseptic technique, and provisions against shock, show thirty-eight recent cases between the ages of sixty-seven and eighty-two, with only two deaths, against twenty-four cases, done twenty years ago, between the ages of sixty and sixty-seven, with a record of six deaths. These figures demonstrate, in addition to improved technique, the surprising fact that old age is no

contra-indication against ovariectomy. Indeed, they seem to have endured the strain and shock equally well, if not better, than an equal number of younger women.

One explanation of this may lie in the fact that in the aged we do not often meet with the broken down septic cases from pus tubes and ovarian and pelvic abscesses, which we find so often before the change of life. Ovarian tumors after this present fewer complications than before.

OPERATOR.	AGE.	RESULT.	PLACE OF RECORD.
Janvin.....	77	Success.....	Am. Jour. Obstet., Vol. XVII, 1884, p. 171.
Bennet of Con.....	75	Success.....	Brit. Med. Jour., 1861, Vol. II, p. 532.
Schröder.....	60	Success.....	Olhansen, Kankelten Oravien, S. 304.
Schröder.....	77	Success.....	Ditto.
Wilcke of Hall.....	79	Success.....	Ditto.
Fancourt Barnes.....	70	Success.....	Prov. Med. Jour., 1888.
Sir Spencer Wells.....	70	Success.....	Medico-Chir. Trans., Vol. LX, pp 224-227.
Sir Spencer Wells.....	77	Death.....	
Thornton.....	70	Success.....	Medico-Chir. Trans., Vol. LXX, pp. 57, 64, 75
Thornton.....	71	Success.....	
Thornton.....	70	Incomplete operation— Death in 48 hours.....	
Bantock.....	71	Success.....	Medico-Chir. Trans., Vol. LXIV, p. 123.
Meredith.....	70	Success.....	Medico-Chir. Trans., Vol. LXXII, p. 50.
Halliday Croom.....	70	Recovery.....	Obstet. Trans. Elin, Vol. XIV, p. 94.
Sarson Tait.....	70	Recovery.....	Brit. Med Jour., 1886, Vol. I, p. 271.
Skene Keith.....	75	Incision to remain—Re- covery.....	Ditto.
Homans.....	82	Recovery.....	Brit. Med. Jour., May 3, 1889.
Owner of Brisbane.....	60	Recovery.....	Brit. Gyn. Jour., Vol. IV, p. 88.
Davis.....	75	Recovery.....	Brit. Gyn. Jour., Vol. III, p. 413.
Keith, Thomas.....	75	Recovery.....	Brit. Med. Jour., 1878, Vol. II, p. 529.
Holland.....	76	Recovery.....	Brit. Gyn. Jour., Part XXXVI, p. 179.
Fancourt Barnes.....	72	Recovery.....	Brit. Gyn. Jour., Part XXX, p. 139, Aug. '92
Edis.....	61	Recovery.....	Brit. Gyn. Jour., Part XXX, p. 162, Aug. '92
Haywood Smith.....	70	Recovery.....	Ditto.
Taber Johnson.....	67	Recovery.....	
Taber Johnson.....	68	Recovery.....	
Taber Johnson.....	67	Recovery.....	

Joseph Price—Ten cases, in patients over 70. All recovered

Thirty-eight cases, with thirty-six recoveries and two deaths.

ART. III.—Cataract—Report of One Hundred Operations—
with Remarks.*

By JOSEPH A. WHITE, M. D., of Richmond, Va.,

SENIOR SURGEON TO THE RICHMOND EYE, EAR, THROAT AND NOSE INFIRMARY.

In 1886, I reported to this Society one hundred and two operations for cataract performed at the Richmond Eye, Ear, Throat and Nose Infirmary prior to that time. This present series of one hundred extractions (see appended table) occurred in my practice since June, 1886. Most of these operations were done at the Eye Infirmary, and I would always prefer to operate in the Institution, instead of at private residences, hotels, or boarding houses, because the patients have the advantage of skilled nursing and attention, with a resident physician constantly on hand in case of any accident or trouble occurring in the course of treatment.

The usual time in the hospital is two weeks; some few leave in ten days; others, on account of complications, may remain three or four weeks.

This report is made because, in a long series of surgical operations of any kind, every one necessarily learns something from such experience that may be of value to others.

No law can be laid down as to an exact mode of operating, for, whilst text-books and treatises on this subject attempt to draw fixed lines for beginners and inexperienced operators, a surgeon's experience soon leads him to do his work in the way that seems best for his patient, and this may carry him away from the apparently beaten road. What seems best to one operator may not seem so to another; and hence the difference of opinion about many operations.

Moreover, each case is a law unto itself, and an observant and experienced surgeon will find indications in individual cases that would have a bearing on the method of operating. Therefore the best operation is the one that

* Read before the Medical Society of Virginia, at Alleghany Springs, Virginia, September 15th, 1892.

gives the most chances of restoring sight to the case immediately under observation.

Even *during* the operation, unforeseen and unavoidable accidents happen that may alter the preconceived plan of doing it. A dull knife, an unruly patient, a twitching of the eyelids, a sudden pressure of the eye-muscles (especially when the tension is above normal), may bring about complications all unlooked for. Any beginner can split a cornea to extract a lens; and with a tractable patient, who has perfect control of his eye, with no accidents and complications, he can complete the operation seemingly as well as the accomplished surgeon. But when the iris entangles in the knife, the lens becomes dislocated, or the vitreous prolapses, it requires the skill that comes only from experience to meet the requirements of the case. Such accidents as these and others happen to all. In my experience, I have had all the accidents and complications that ever occur in connection with the operation and treatment of cataract.

Dexterity in operating doubtless increases the patient's chances of a good result, but it is a curious fact that the most perfectly performed operation, without halt, hitch or hindrance, is sometimes followed by such after-complications as to destroy the eye, or lower the expected acuteness of vision. On the other hand, a labored operation, attended by most unfortunate accidents, frequently results brilliantly.

I remember some years ago a young gentleman, who followed my clinic at the Richmond Eye, Ear, Throat and Nose Infirmary as one of my assistants for a year or more (he now has a fine practice as a specialist), attempted a cataract extraction on an old negro. He met with more resistance from the cornea than he expected, and with very little effort he effected a section which opened cornea, capsule and hyaloid in one movement. Out came iris, lens, and part of the vitreous. In disgust he bandaged the eye, and never looked at the case again for five or six days; and when he did, he found he had done a brilliant operation. The iris had returned to its place, the wound was healing nicely, and

the pupil was clear. Still no one advises cataract extractions by this method, and I am sure he has never tried to renew this feat.

The operation *under cocaine is absolutely painless*; as a rule, there is not the slightest sensation. The strength of the solution of cocaine should not exceed four per cent., because this drug often lessens intra-ocular tension, and if, under a stronger solution this occurs, it is apt to interfere with the delivery of the lens.

The only instruments introduced into the eye are *the knife* for cutting the corneal section, and *the cystotome* to open the capsule, or *the forceps* to remove the anterior capsule, as may be the choice of the operator. The delivery of the lens is often accomplished by pressure of the lids, the speculum being removed from the eye. Some operators make pressure on the cornea with the spatula from below upwards to expel the lens, but I prefer pressure on the outside of the lower lid to accomplish the same object, but do not allow the edge of the lid to touch the wound. Most of the operations were smooth, and unattended by any accident.

ACCIDENTS occurred thirteen times; the knife entangled in the iris twice; the lens was dislocated five times, and vitreous was lost six times.

When the *knife entangles in the iris*, my rule is to cut straight through the iris which will take off a little piece at the pupillary edge and may cause bleeding in the chamber; beyond this, the accident is of no moment.

Loss of vitreous, whilst apparently a serious complications, was followed by no bad results in these cases. It is singular that in every one of them the result was among the best, the healing process being uninterrupted. This is caused by a too forcible effort to evacuate the lens, or by pressure of the lids and eye-muscles, or by a sudden increase in the eye-tension, which sometimes occurs inexplicably and may rupture the hyaloid. It is unavoidable at times.

Dislocation of the Lens.—When dislocation of the lens occurred, it was extracted with a spoon or hook, as seemed best in each case. This accident may be due to the

pressure being made too low on the eye, so as to push the lens up and tilt the lower edge *forwards* instead of *backwards*. The upper edge then tilts back behind the iris instead of through the pupil and into the corneal section; or it may be caused by rupture of the hyaloid, with dislocation, into the vitreous; or the suspensory ligament may be so weak as to give way as soon as the cystotome is applied to the capsule.

In one of these cases (Mr. Silas Woods, of New Market, Va.) (No. 81 of table), the moment I attempted to rupture the capsule, the ligament gave way everywhere except at the top, the lens in the capsule jumped up behind the iris, and I could not remove it without such manipulation as threatened to empty the eye. I therefore let it alone, and when the wound healed the lens was hung, as it were, to the roof of the eye behind the iris, the lower edge of the lens showing in the upper half of the pupil. Instead of making any attempt to remove it, I performed a small iridectomy downwards and inwards, and one year after the lens still hung in this position, and the patient had vision of $\frac{2}{3}$ with the correcting glasses; but it gradually sagged down, and in November, 1891, I extracted the lens with a hook, with a loss of some vitreous, but a perfect result. His vision to-day is $\frac{2}{3}$. In one other case, where the lens became dislocated, and the patient was an unruly one, having no control of his eyelids, I let the eye alone until it healed up, and some weeks after removed the lens, with an equally happy result.

Complications Happened in Twenty-two Cases.—*Prolapse of the iris* occurred both during the operation and during the healing process. Forty-six of the cases were operated on *without iridectomy*, nearly all of these among the later ones. But prolapse of the iris occurred both in cases *with*, as well as in those *without* an iridectomy. Sometimes the prolapse takes place during the operation; it is replaced, and may or may not occur again during the healing process. Usually, however, the prolapse occurs after the eye is closed, and is discovered the first time we examine it to see how it is doing. It may have seemed perfect when dressed, the iris in

place, the lips of the corneal wound in neat co-aptation, and yet we find a prolapse when we open it. How soon or late after the operation this happens, we cannot say. What it is due to, is equally uncertain. Restlessness of the patient, a slight increase of the tension, an irregular wound in the cornea, or a straight cut through the upper part of the section by turning the edge of the knife outward, may any of them facilitate a prolapse. It is hard to say what causes it, but it is a troublesome, and sometimes a dangerous complication when it occurs. The way to remedy it is to cut open the conjunctival covering of the prolapsed portion, grasp it with the iris forceps, pull it out of the wound and cut it off, as in making an iridectomy. It should not be shaved off with scissors along the line of the incision, certainly not before all irritation has subsided, because this leaves iris tissue still in the wound, and not only retards the healing process, but may cause after trouble, such as iritis, etc.

Other complications, that took place during the healing process, were re-opening of the wound, iritis, and capsulitis. In no case was there any trouble of the cornea, ciliary body, or vitreous; *not a single case of purulent or even fibrinous infiltration of the cornea*, took place, and this may have been due to the strict antisepsis.

Iridectomy was done fifty-four times—in forty-six cases no iridectomy.

Some time back, I always did an *iridectomy*, except in exceptionally favorable cases; now, I never do an iridectomy, except in unfavorable cases; as when the iris will not respond to atropia, or there is increased tension, or adhesions to the capsule, or when the cornea wrinkles after the section is made; or, when the nucleus is large and the cornea small.

Having had such favorable results in extraction with iridectomy, I was very slow in altering my mode of operating, but am satisfied that, all things being equal, it is better to do *without an iridectomy* if possible. Of course the danger of prolapse of the iris is greater, but a judicious use of eserine or, preferably, pilocarpine, will usually prevent it. My

objection to eserine is that, if not used very carefully, it will set up iritis. With restless patients it is best to do an iridectomy, as the danger of prolapse of the iris is less, and the eye need not be examined for several days.

Secondary Operation.—In more than half my cases (fifty-six times), I did the secondary operation of opening the capsule with the knife-needle, and I think it would do no harm to do it in all cases, as, sooner or later, the empty capsule becomes wrinkled, if it does not cloud up, and this lowers the visual acuteness considerably. I have just had to needle a case in both eyes that left me eight years ago with V $\frac{2}{30}$, and had it reduced to $\frac{2}{200}$ in one, and $\frac{2}{70}$ in the other, by the aforesaid wrinkling. She went home a few weeks ago with $\frac{4}{40}$ in the one eye and $\frac{2}{20}$ in the other.

The operation is usually harmless, if properly done with strict antiseptic precautions. Moreover, if done soon after the extraction, it is easy to tear or cut the capsule; whereas a long time after, it has become tough and inelastic. The best time to do it is two or three weeks after the extraction. *The possible danger of a glaucomatous attack* following the needle-operation must be considered, as quite a number of such cases have been recorded recently. We have had two such cases at the Infirmary. The longer the operation is delayed, the more likely this complication may present itself. A prompt paracentesis may be all-sufficient if the tension increases, but an iridectomy may be demanded.

THE VISUAL RESULT

In 8 cases was.....	$\frac{20}{20}$
12 "	$\frac{20}{30}$
18 "	$\frac{20}{40}$
17 "	$\frac{20}{50}$
13 "	$\frac{20}{60}$
5 "	$\frac{20}{70}$
7 "	$\frac{20}{80}$
14 "	$\frac{20}{100}$
3 "	$\frac{20}{200}$
1 "	$\frac{10}{200}$
2 "	negative.

As you will see from this table, there were 96 per cent. of good results, 2 per cent. of moderate results, and 2 per cent. with no results—i. e., out of 100 blind people, 98 were restored to sight. One of these cases with no result was followed by atrophy of the nerve, which caused blindness two months after (No. 10 of table), although the primary result was $V=\frac{5}{200}$, with promise of good vision. The other (No. 43 of table) had calcareous degeneration of the capsule, and whilst the extraction of the nucleus was successfully accomplished, the secondary operation was fruitless, the opening made by the needle closing up. As she was going back to Ireland, and had a brilliant result from my operation on the other eye, she declined to have the capsulotomy repeated.

These were the only cases in the series that did not recover useful vision, the results being all that could be expected, ranging from $\frac{10}{200}$ to $\frac{2}{20}$. Even the two bad results above mentioned *could hardly be denominated failure in extraction of cataract*, as one went blind two months after sight had been restored by the operation, and the other was a case that might have recovered vision by a removal of the chalky capsule.

Two cases eventually lost the use of the eye. One (No. 41 of table), who left me with $V=\frac{2}{40}$, had atrophy of the nerve two years after the operation; and another (No. 39 of table), whose $V=\frac{2}{40}$ after the eye healed, and could shoot robins on his return home, had iritis three years later, followed by closure of the pupil. These troubles are not to be attributed to the operation. One case, Mr. Israel Allen (No. 82 of table), with a brilliant result, dropped dead in the hospital from apoplexy whilst making preparations to leave on the next train.

One would think that the *length of time an eye had been blind* would make some difference in the visual result; but it is strange how long an eye can be blind from cataract and still get a perfect result. In one of these cases (a Mr. James Hodge (No. 83 of table), an old employee of the

Tredegar Iron Works), 68 years of age, who had been blind in the right eye *twenty-five years*, and in the left eye only a short time—the extraction was followed in his case by a brilliant result in each eye—in the one that had been blind twenty-five years, almost as perfect as in the one that had been blind only a short time.

Age does not seem to have very much influence upon the result. The older patients, if in good health, seem to have as good chance for restoration of sight as the younger ones. For instance, of the two cases operated upon over eighty, one, Mr. Jas. Clarke (No. 22 of table), an inmate of the "Confederate Soldier's Home," and former Mayor of Manchester, got a vision of $\frac{2}{7}$, and was able to read in comfort to the day of his death; and the other, Mrs. Butler, of Ashland (No. 16 of table), left me with vision $=\frac{2}{8}$; whereas, one of the two cases with no result, from white atrophy, was but fifty years of age.

Of the cases, one was under forty; six between forty and fifty; twenty-one between fifty and sixty; thirty-five between sixty and seventy; twenty-nine between seventy and eighty, and two over eighty. The two cases with moderate results, and the case with calcareous capsule, were all between seventy and eighty. Age, therefore, seems no bar to the operation, or to possible recover of vision.

Antisepsis.—Such results as we now get in cataract operations, 96 per cent. to 99 per cent. of useful eyes in every hundred blind ones, is due not only to improved methods of operating, but to the attention given to strict rules of cleanliness and antiseptic precautions. Thorough cleanliness and disinfection of the eye, conjunctival sac and eyelids, of the hands of the operator and assistants, and of the instruments used, explain the secret.

I use bichloride of mercury, 1 to 2,000, for washing my hands and the patient's eyes; cleanse my instruments in boiling water, and then put them in alcohol. Before introducing any of them into the eye, I dip it in the bichloride solution as I take it from the alcohol, and, in this way, feel

satisfied no septic material can be carried into the eye. During the operation I keep the eye flooded with the solution. I have never seen any bad effects from it, the worst being a little irritability of the eye, which may cause smarting or pain a few hours afterwards, when the effect of the cocaine has passed away, but that is all. In over one hundred and fifty consecutive operations at the Eye Infirmary, there has been no signs of slough or pus about an eye under this treatment.

After-treatment.—As soon as the operation is finished, a drop of a solution of pilocarpine is instilled, and the eye sealed with a piece of silk isinglass plaster applied with the bichloride solution. The operations are generally done between one and two o'clock, and no other dressing is applied until night. Then, and every night afterwards, a pad of absorbent cotton is put on, with a light bandage to protect the eye against injury in sleep. During the day, the bandage and cotton are removed for the comfort of the patient, and because any changes about the eye can be observed better and sooner with the simple translucent plaster dressing. But whilst the power of observing the lids, etc., without removing the dressing, is an advantage, it is not great enough, in my opinion, for us to discard the protection that the cotton pad gives against injury, especially at night. For the first forty-eight hours, absolute quiet is required of the patient, and this is easier to obtain by confinement to bed than if he is allowed to sit up or move about. Common prudence after any surgical operation would suggest this, and we cannot err on the side of prudence. Some surgeons even handcuff the patients at night to prevent the hands injuring the eye during sleep. After forty-eight hours the eye is opened, and if the iris has prolapsed, it is drawn out, cut off, and the dressing re-applied. If the eye is all right, only a drop of atropia solution is instilled, the dressing applied, and the patient allowed to sit up. On the fourth day, if there is no complication, he is allowed to move about the room, with the sound eye released; otherwise not, because the movements of the sound eye affect the operated one.

I usually keep the operated eye closed for seven days, because I have seen complications arise, even the wound reopen, up to that time, and I wish to take all precaution where eyesight is at stake. The fact that some surgeons have operated on cataract patients, and turned them loose without any precaution, and had good recoveries, is no reason to neglect the commonest rules of the after-treatment in surgical operations.

Ordinary attention, care and prudence, should be the rule, and not the exception. The surgeon who follows them will have the best results, and the patients who are under his care, will have the best chance for eyesight.

Preliminary Operations—Artificial Ripening.—The most annoying time to sufferers from cataract, is the period of its development. Occasionally this is rapid, but usually very slow, and sometimes it takes months and years to ripen so as to be extracted. Some surgeons extract cataract without waiting for it to be ripe, but it is a risky proceeding, *sometimes followed by loss of the eye*. Various methods have been suggested to overcome this difficulty, and Foerster's operation of doing an iridectomy and rubbing the cornea, is the one most generally adopted. I reported several cases of this operation in 1885, but they were not satisfactory, two of them having had serious troubles following the operation. Afterwards I attempted to ripen cataract without doing any iridectomy, simply by emptying the anterior chamber and rubbing the lens through the cornea. This method I call "paracentesis and external massage." I reported two of these operations in 1886. Ten of this series have been operated on by this method with rapid ripening of the cataract in from one day to two weeks. Three others have been operated on to ripen the cataract, but extraction has not yet been done, making fifteen operations of this kind in all to date. Two of these required the operation repeated before the cataract was fully ripened.

In not one single case was there iritis, corneal opacity, dislocation of the lens, or trouble in subsequent extractions

which were perfectly smooth, and resulted in good vision. (I have recently presented a paper before the American Medical Association on this subject, with a report of fifteen cases, which attracted some attention, and is published in Dr. Knapp's *Archives of Ophthalmology*, October, 1892).

Every case of cataract does not need help from the surgeon to hasten maturity; it is only a small number of the grand total that require it. When cataract has advanced in both eyes equally, and when the patient has reached the stage of *no longer being able to read*, or attend to the work that gives him and his family support, this necessity arises. *Even in these cases some are not suitable for massage, for unless the zonula is intact, and the pupil can be dilated, this operation should not be attempted.* It is most successful when the nucleus is opaque, as it acts on a base upon which to crush the cortex. Opacities at the posterior pole, if large enough, serve the same purpose. But I have operated equally on true cortical cataracts as soon as the opaque peripheral striae had invaded the pupillary area sufficiently to interfere with reading.

The operation is especially called for under sixty years of age when the cataract has reached the proper stage, because the cortex is then more liable to be sticky and give trouble. I think it would be a prudent precaution to triturate all cataracts under that age (unless hyper-mature), even when apparently ripe, so as to dislodge the sticky masses of cortex from the capsule, and perfect their opacification, thus insuring their easier delivery.

My method of operating is very simple. After satisfying myself that the tension is not below normal, that the zonula is intact, and that the pupil can be easily dilated, I thoroughly evacuate the aqueous humor with the ordinary paracentesis needle, and vigorously rub the lens through the cornea up and down, out and in, as well as in a circle, varying the direction of the rubber or tortoise shell spoon I employ to avoid striated opacities of the cornea, which may result from constant friction in one direction. I usu-

ally continue this until the irritation of the eye warns me to desist. Atropia is instilled immediately and cold applied to the eye, the patient holding a piece of ice rolled in a thin layer of absorbent cotton against the closed lids until the eye aches; after the aching subsides, it is re-applied. An hour or so of this treatment, followed by instillation of atropia every hour or two the same day, is all that is done. No bandage is used. Sometimes considerable irritation is manifested, and slight pain is occasionally complained of, but I have never seen any unpleasant complications. In the majority of my cases the lens showed increased cloudiness the next day, and I have seen cases that could make out large letters, become perfectly blind in forty-eight hours. In some the opacification proceeds more slowly, taking several weeks to become complete. Even where it is seemingly very rapid, I think it advisable to wait two weeks for the extraction. In two of these cases I had to repeat the operation four weeks after the first trituration because of the tardy result. In one of them opacification was complete forty-eight hours after the second attempt at ripening the cataract.

The following case of cataract will serve as an illustration of the operation and its results:

W. R. Goodwin, of Hampton, Va. (No. 99 of table), aged 42, consulted me on Sunday, March 27th, 1892. He had cataract developing in both eyes. In the right eye it was in its incipient stage and vision was $\frac{2}{40}$. The left eye had an opaque nucleus and clear cortex free from striae. Vision, with a dilated pupil, was $\frac{1}{200}$. He told me that the left eye began to fail about seven or eight years before, and had very gradually reached its present condition. He had been to Philadelphia twice, the last time about Christmas, 1891, and had each time been sent back to wait for a more complete opacification of the lens before it could be extracted. He had come to see me to see if something could not be done to hasten matters, and end this interminable waiting. I suggested that he allow me to ripen it; he consented. I dilated the pupil thoroughly, evacuated the aqueous humor, and trituated through the cornea with a tortoise shell

spoon for about two minutes. The eyeball became somewhat injected. I prescribed a solution of atropia, cocaine, and boracic acid, ordering it to be used every two or three hours. He left my office to see the city, and returned to Hampton on the afternoon train. Two weeks after he came back, again on Sunday. I found the lens perfectly opaque throughout. He said he had some slight pain and irritation about the eye the evening following the operation, and that it was perfectly blind in two days. On the day after his return I extracted the cataract with a simple corneal section and removal of the anterior capsule with Eugene Smith's modification of Wecker's capsule forceps. The operation was smooth, and healing rapid. On the tenth day he returned to Hampton. On May 22nd, he came back to have the capsule needled and get his glasses. With the correcting lens his vision was $\frac{20}{20}$, and the pupil was so clear, the secondary operation was not required.

Preliminary Iridectomy.—This operation is occasionally called for. In fact, if it were not for some slight annoyances from the resulting coloboma and the inconvenience of waiting several weeks for the extraction of the cataract, it would be done in all cases, whether necessitated or not, as there is no doubt that it materially lessens the risks of the subsequent extraction, and ensures more rapid healing and a shorter term of after-treatment. The extraction is easier, the toilet simpler, and there is no danger of prolapse of the iris. But, as the cosmetic effect of a round pupil and a normal looking eye seems to be now as much of a consideration as restoring sight, this operation has few advocates. It is, however, best to do it when the eye is irritable or the tension above normal, or the pupil will not respond to a mydriatic, or adhesions between the iris and capsule, as it increases the chances of restoring sight.

200 E. Franklin St., Richmond, Va.

[The appended tables of cases give name and address, age, mode of operation and accidents, complications and remarks, and results.]

ONE HUNDRED CASES OF CATARACT EXTRACTION.

(Unless otherwise mentioned, the operations were without accident or subsequent complication. Secondary operation means needling the capsule or capsulotomy, unless otherwise stated.)

No.	NAME, ETC.	AGE.	MODE OF OPERATION AND ACCIDENTS.	COMPLICATIONS AND REMARKS.	Result
1.	Henry Lane, Burkeville, Va.....	65	With iridectomy.....	Secondary operation.....	0 0 0
2.	Rev. Mr. Turner, Louisa C. H.....	69	R. E., with iridectomy.....	Secondary operation.....	0 0 0
3.	Rev. Mr. Turner, Louisa C. H.....	69	L. E., with iridectomy.....	Secondary operation.....	0 0 0
4.	Mrs. Annie Walker, Richmond, Va.....	50	R. E., with iridectomy.....	Reaction started in capsule third day and extended to iris. Pupil filled by yellowish white deposit on fifth day. In sixteen days was nearly absorbed. Secondary operation.....	100
5.	Mrs. C. Johnston, Richmond, Va.....	72	L. E., with iridectomy.....		100
6.	Mrs. Caroline Brown, Richmond, Va.....	70	With iridectomy.....	Healing smooth, except slight iritis. Secondary operation.....	20 100 100
7.	Mrs. Sarah E. Walters, Danville, Va.....	70	Knife entangled in iris; bleeding into chamber; loss of vitreous.	Secondary operation.....	0 0 0
8.	Mr. T. Malone, Richmond.....	66	With very small iridectomy.....	Secondary operation.....	0 0 0
9.	Mr. Jos. Wells, Charlottesville, Va.....	70	Small iridectomy.....	Secondary operation.....	100
10.	Miss Leona Smith, Blacksburg, Va.....	50	L. E., vitreous lost as capsule was opened; lens removed with spoon.	Eye healed kindly, in three weeks V=200. Secondary operation done in 5 weeks, and nerve found blanched. Optic nerve atrophy resulted in total blindness.....	0 0 0
11.	Mrs. Stone, Dinwiddie county.....	63	Small iridectomy.....		0 0 0
12.	Giles Logan, Halifax county, Va.....	75	Lens dislocated upward; removed with hook; capsule removed with forceps.....	Secondary operation.....	0 0 0
13.	Mr. Henry Sexton, Wytheville, Va.....	36	With small iridectomy.....	Secondary operation.....	0 0 0
14.	Dr. Geo. C. Trezevant, Delhi, La.....	64	Instead of iridectomy, simply clipped sphincter of iris.....	Plastic capsulitis. Secondary operation.....	0 0 0
15.	Mrs. Fanny Mays, Amelia C. H., Va.....	50	Iridectomy.....	Secondary operation, followed by erysipelas of eyelids and face, with perfect recovery.....	0 0 0
16.	Mrs. Butler, Ashland, Va.....	81	Lens dislocated; vitreous lost.....	Capsulitis. Secondary operation.....	0 0 0
17.	Mr. Chas. Livzie, Nottoway, Va.....	66	Posterior synechiae from old iritis; operation smooth.....		0 0 0

ONE HUNDRED CASES OF CATARACT EXTRACTION—(CONTINUED).

No.	NAME, ETC.	AGE.	MODE OF OPERATION AND ACCIDENTS.	COMPLICATIONS AND REMARKS.	Result
18.	John Jefferson, Cornland, Va.....	65	R. E., with iridectomy.....	.....	$\frac{2}{0}$
19.	John Jefferson, Cornland, Va.....	65	L. E., with iridectomy.....	.....	$\frac{0}{0}$
20.	Mr. Turner, Dispatch Station, Va.....	41	With iridectomy.....	.....	$\frac{0}{0}$
21.	Robert Johnson, Westham, Va.....	60	Eye soft; vitreous fluid; lens removed with hook.....	.....	$\frac{0}{0}$
22.	Mr. Clark, Confederate Soldiers' Home.....	82	With iridectomy.....	Secondary operation.....	$\frac{2}{0}$
23.	Dr. J. Wright, Columbia, La.....	67	With iridectomy.....	Secondary operation.....	$\frac{0}{0}$
24.	Mr. Geo. P. Luck, Chilesburg, Va.....	56	With iridectomy.....	Plastic capsulitis. Secondary operation.....	$\frac{0}{0}$
25.	Mr. Balmer, Richmond, Va.....	77	With iridectomy.....	.....	$\frac{0}{0}$
26.	Mrs. Amanda Smith, Farmville, Va.....	55	With iridectomy.....	Capsule cloudy. Secondary operation.....	$\frac{0}{0}$
27.	Mrs. M. L. Armistead, Farmville, Va.....	72	With iridectomy.....	Secondary operation.....	$\frac{0}{0}$
28.	Frederick Mitchell, Richmond, Va.....	68	With iridectomy.....	.....	$\frac{0}{0}$
29.	Wm. Taylor, Richmond, Va.....	60	Without iridectomy.....	Good vision for ordinary purposes, but owing to ignorance could not get any determination of it. Iritis, followed by cloudy capsule. Secondary operation.....	$\frac{2}{0}$ (?)
30.	Miss Belle Beverley, Orange county, Va.....	33	Without iridectomy.....	.....	$\frac{0}{0}$
31.	F. Moore, Easter P. O., Va.....	75	R. E., without iridectomy.....	Third day found iris prolapsed; cut it off; capsule cloudy; secondary operation.....	$\frac{2}{0}$
32.	F. Moore, Easter P. O., Va.....	75	L. E., with iridectomy.....	.....	$\frac{2}{0}$
33.	G. C. Walton, Glen Moore, Va.....	62	Cataract artificially ripened; two weeks later extraction, without iridectomy.....	.....	$\frac{0}{0}$
34.	Miss Agnes Lemon, Longdale, Va.....	74	With iridectomy.....	.....	$\frac{2}{0}$
35.	Dr. J. M. Daniel, Fredericksburg.....	72	With iridectomy.....	Capsule very cloudy; result = $\frac{2}{0}$; needed capsule ineffectually and would not submit to a second capsulotomy.....	$\frac{0}{0}$
36.	W. L. Eanes, Chula, Va.....	36	Cataract artificially ripened; three weeks later extraction, without iridectomy.....	.....	$\frac{1}{0}$
37.	Mr. O'Keefe, Confederate Soldiers' Home,	68	Without iridectomy.....	.....	$\frac{0}{0}$
38.	Beverley Phenix, Granite, Va.....	70	Cataract artificially ripened; later extraction, with iridectomy.....	.....	$\frac{0}{0}$
39.	Thos. Barham, Roxboro, Va.....	76	R. E., with iridectomy.....	.....	$\frac{2}{0}$

ONE HUNDRED CASES OF CATARACT EXTRACTION—(CONTINUED).

No.	NAME, ETC.	AGE.	MODE OF OPERATION AND ACCIDENTS.	COMPLICATIONS AND REMARKS.	Result
40.	Thos. Barham, Roxboro, Va.....	76	L. E., without iridectomy.....	Iritis and capsulitis. Secondary operation.....	28
41.	Mrs. Mary S. Smith, Robio's, Va.....	54	Without iridectomy.....	Secondary operation.....	28
42.	Jacob Denn, Richmond, Va.....	70	With iridectomy.....	Capsule densely clouded; attempted to tear it without success.....	100
43.	Mrs. Nancy Duggan, Richmond, Va.....	74	R. E., lens calcareous; extraction of nucleus smooth.		Result
44.	Mrs. Nancy Duggan, Richmond, Va.....	74	Lens artificially ripened; extraction with iridectomy.....	Slight capsulitis. Secondary operation.....	Negative
45.	R. R. Hudgins, Wilson, Va.....	51	Without iridectomy.....	Prolapse of iris; pulled out and cut off; iritis with post-synechia. Secondary operation.....	28
46.	James Munroe, Bacon's Castle, Va.....	64	With iridectomy.....	Useful vision, but did not get exact determination.	28
47.	Julia Brown, Locust Dale, Va.....	?	Morgagnian cataract.....	Secondary operation.....	28
48.	Elizabeth Chapman, Richmond, Va.....	60	L. E., with iridectomy; vitreous prolapsed.....	Spongy capsulitis. Secondary operation.....	28
49.	Elizabeth Chapman, Richmond, Va.....	60	R. E., with iridectomy.....		100
50.	Thos. Hains, Talcott, W. Va.....	60	Lens dislocated and removed with hook.....		28
51.	Lucy Mallory, Newberne, Va.....	60	With iridectomy.....		28
52.	Mrs. Mary S. Smith, Robio's, Va.....	53	Without iridectomy.....		28
53.	C. E. Childress, Richmond.....	41	Without iridectomy.....	Secondary operation.....	28
54.	Rev. Mr. Lear, Petersburg.....	78	Very small iridectomy; nucleus large; delivery labored; vitreous lost.....		28
55.	Thos. Swan, Milton, N. C.....	59	With iridectomy.....	Secondary operation; iridectomy.....	100
56.	Mrs. Andrew Ellett.....	58	Without iridectomy.....		100
57.	Mrs. Agnes Lemon, Longdale, Va.....	75	With iridectomy, as iris was sluggish.....		28
58.	Mrs. Tischner, West Point, Va.....	60	Without iridectomy.....	Secondary operation.....	28
59.	Mr. D. L. Godsey, Farnville, Va.....	66	Without iridectomy; capsule removed with forceps.....		28
60.	B. H. Brightwell, Bremo Bluff, Va.....	65	With iridectomy.....	Secondary operation.....	28
61.	Dr. B. P. Morris, Amherst C. H.....	62	With iridectomy.....	Third day wound reopened and prolapse of iris, followed by iritis and capsulitis; secondary operation, but not satisfactory.....	28

ONE HUNDRED CASES OF CATARACT EXTRACTION—(CONTINUED).

No.	NAME, ETC.	AGE.	MODE OF OPERATION AND ACCIDENTS.	COMPLICATIONS AND REMARKS.	Result
62.	Priscilla Jones, Richmond, Va.....	60	Without iridectomy.....	Secondary operation.....	38
63.	Edith Morris, Stuart, Va.....	55	Without iridectomy.....	Slight iritis. Secondary operation.....	38
64.	Mr. R. L. Allen, Lipscomb, Va.....	68	R. E., with iridectomy.....	Secondary operation.....	38
65.	Mrs. Columbia Edwards, Richmond, Va..	76	Without iridectomy.....	Secondary operation.....	38
66.	Mrs. Tischner, West Point, Va.....	60	Without iridectomy.....	Secondary operation.....	38
67.	Mr. T. G. Swats, Hinton, W. Va.....	36	Preliminary iridectomy, because of ciliary tenderness.....	Violent iritis, with adhesions. Secondary operation,.....	38
68.	Mrs. Roocke, Covington, Va.....	74	With iridectomy.....	.....	38
69.	John R. Preston, Richmond, Va.....	.....	Without iridectomy.....	.....	38
70.	Mrs. Perry, Richmond, Va.....	68	Without iridectomy.....	.....	38
71.	Mrs. Wm. Phillips, Marksville, Va.....	70	L. E., with iridectomy.....	Iritis. Secondary operation.....	38
72.	Mrs. Kerr, Williamsville, Bath county, Va.	74	With iridectomy.....	.....	38
73.	Mrs. Zirkle, Luray, Va.....	50	With iridectomy.....	Secondary operation.....	38
74.	Mrs. Dr. Dillard, Salem, Va.....	60	Without iridectomy.....	.....	38
75.	Mr. S. H. Gordon, Lovingsston, Va.....	75	With iridectomy.....	Secondary operation.....	38
76.	Mrs. Wm. Phillips, Marksville.....	.....	R. E., without iridectomy.....	Secondary operation.....	38
77.	Mrs. Zirkle, Luray, Va.....	.....	Without iridectomy.....	Secondary operation.....	38
78.	J. Thompson, Scottsburg, Va.....	52	Without iridectomy.....	Secondary operation.....	38
79.	Mrs. J. A. Wright, Beaver Pond, Va.....	36	R. E., without iridectomy.....	.....	38
80.	Mrs. C. Stringfellow, Richmond, Va.....	78	Without iridectomy.....	.....	38
81.	Silas R. Woods, New Market, Va.....	61	Eye soft; attempted extraction without iridectomy; lens dislocated from below and hung up behind iris as if tied there.	As lens remained suspended I did a small iridectomy down and in, which gave $V=\frac{2}{3}\frac{10}{6}$. Some months after, it was still in this position, but it gradually sagged down, and last November I removed the dislocated lens with a hook. The vitreous was perfectly fluid, and ran out like water during the operation, but the healing was good and result perfect.....	38
82.	Israel Allen, Hawkinstown, Va.....	74	Without iridectomy.....	Slight prolapse on fifth day cut off; in three weeks result $=\frac{2}{3}\frac{0}{0}$; was arranging to go home and died of heart disease day of his expected departure.....	38
83.	James Hodge, Richmond, Va.....	68	R. E. blind 25 years; lens extracted without iridectomy.....	Secondary operation.....	38

ONE HUNDRED CASES OF CATARACT EXTRACTION—(CONTINUED).

No.	NAME, ETC.	AGE.	MODE OF OPERATION AND ACCIDENTS.	COMPLICATIONS AND REMARKS.	Result
84.	J. S. Prinz, Luray, Va	74	Preliminary iridectomy 2 weeks before	Secondary operation.....	28
85.	Mrs. Sallie A. Jones, Guineas, Va.....	45	Without iridectomy.....	.....	28
86.	James Hodge, Richmond, Va.....	68	L. E., iris non-dilatable, hence an iridectomy.....	.....	38
87.	L. D. Bousman, Horsepasture, Va.....	66	Without iridectomy.....	Secondary operation.....	38
88.	Mrs. J. A. Wright, Beaver Pond.....	36	L. E., without iridectomy.....	Some iritis and capsulitis; capsule cloudy and needs a needle operation.....	20
89.	Dr. A. B. Woods, Grifton, N. C.....	65	Without iridectomy.....	Secondary operation.....	48
90.	G. W. Rothgeb, Shenandoah, Va.....	55	Iris sluggish, and hence did an iridectomy.....	Slight iritis; wound healed slowly.....	48
91.	G. M. Kitchen, Petersburg.....	55	Without iridectomy; Morgagnian cataract, and lens removed with hook.....	.....	38
92.	P. Whitlock, Richmond.....	58	Cataract artificially ripened and extracted without iridectomy.....	Slight prolapse of iris, and wound reopened on third day, but result nearly perfect.....	48
93.	Mrs. Wallace, Waynesboro.....	72	Without iridectomy.....	Iritis.....	38
94.	Mr. M. C. Lawrence, Grady, Va.....	61	Cataract artificially ripened; extracted without iridectomy.....	.....	60
95.	Mrs. M. Johns, Barboursville, Va.....	72	Without iridectomy.....	.....	38
96.	Louis Ellis, Henrico county.....	67	Without iridectomy; lens dislocated and removed with hook, cataract artificially ripened; extracted without iridectomy.....	.....	38
97.	Catherine Richardson, Richmond.....	65	Without iridectomy.....	.....	28
98.	Mrs. A. L. Luck, Richmond, Va.....	50	Cataract artificially ripened and removed without iridectomy.....	.....	48
99.	W. B. Goodwin, Hampton, Va.....	42	.....	.....	48
100.	Mrs. G. W. Boshier, Cold Harbor, Va.....	55	Cataract artificially ripened and removed without iridectomy.....	Had capsulo iritis, which continued some weeks; secondary operation was followed by symptoms of glaucoma, but recovery perfect.....	48

ART. II.—Obstruction of the Upper Air Passages.*

By J. G. CARPENTER, M. D., of Stanford, Ky.

PRESIDENT OF THE CENTRAL KENTUCKY MEDICAL SOCIETY; FELLOW OF THE AMERICAN RHINOLOGICAL ASSOCIATION; MEMBER OF THE KENTUCKY STATE MEDICAL SOCIETY, MISSISSIPPI VALLEY MEDICAL SOCIETY, AND PERMANENT MEMBER OF THE AMERICAN MEDICAL ASSOCIATION.

Before doing any operation within the upper air passages, the inflammation, congestion, or irritation should be reduced to a minimum with local treatment, and the patient's constitution, fortified with reconstructives, placed in the best possible condition for operation. While most of the operations are those of minor surgery, yet some of the most serious sequences can take place by neglect of preparatory treatment. Besides the *upper air passages* are subject to more irritation and varieties of irritation, than any other portion of the body—numerous pathological conditions within, and damp, cold air, or dusty air, impregnated with minute particles of sand, grit, or dust, attending various occupations. The foul odors from decaying animal and vegetable matter, and foul gases, indicate the importance of thorough aseptic and antiseptic and protective measures before, during, and after operation. Many of the most brilliant achievements in surgery, with lasting benefit, have been accomplished in nasal surgery.

The following cases of myxomatous growths furnish illustrations of the success of nasal surgery.

CASE I.—Mr. E. J., age 25 years, good family history, general health good, excepting catarrhal inflammation of nasal chambers and pharynx of late, almost constantly attended with asthma. On posterior rhinoscopic examination, a myxoma, the size of a hen egg, was seen pendant from the vault. The parts were rendered aseptic, and avulsion done. The catarrhal symptoms abated in about ten days. Perfect health has been enjoyed ever since for several years.

CASE II.—Mrs. G. W. W., age 63 years, a dyspeptic, and has rheumatic diathesis; has complained of symptoms of

* Read before the Central Kentucky Medical Society, October 20th, 1892, at Lancaster, Ky.

irritations and inflammations in the upper air passages for several months. After taking a short ride she was seized with a terrific epistaxis, and the posterior nares were tamponed by her physician. The case recovered from the shock and anæmia, to have a recurrence of the violent epistaxis when tamponing was again resorted to. When the case came to me, on posterior rhinoscopy, two myxomata, the size of cherries, were observed in the upper pharynx, hanging from the superior turbinated processes through the posterior nares. These were removed with Rumbold's post-nasal forceps; afterwards, for two weeks, the rhino-pharyngitis was treated, the rheumatic dyscrasia corrected, and for two years the patient has enjoyed good health.

CASE III.—M., age 65 years, a bachelor, general health good, except disease of upper air-passages; family history most excellent. Had an attack of influenza in 1872-3. Since then he has had a more or less constant rhino-pharyngitis, with asthma recurring almost every night from 12 to 3 o'clock A. M., especially in the winter and during the damp weather of fall and spring. In March, 1889, the patient presented himself for examination; "he said for cough and aggravated catarrh of the nose and throat. Sometimes nose-bleeding occurred." The case had been diagnosed by general practitioners chronic bronchitis, and even phthisis pulmonalis on account of constant cough, expectoration, emaciation, and prostration. Anterior rhinoscopy revealed two polyps in each nasal chamber attached to the lower margins and anterior ends of the middle turbinated processes. Posterior rhinoscopy presented to view four post-nasal myxomata, pendant from the vault and posterior nares. The snare, post-nasal forceps, and Coome's forked knife, were used. The turbinated processes being hypertrophied, were chromicised, and the rhino-pharyngitis treated with cleansing, aseptic, non-irritant, and soothing sprays, using vaseline as a protective at the termination of each local treatment. Two polyps in the right nares returned, and again were snared, their bases chromicised. The deficiencies in the blood and nerve-tone, were supplied with tonics. The cough, expectoration, sneezing, nasal stenosis, rapidly disappeared, patient regained vigor and health, and occasionally has an asthmatic attack—especially in damp or wet weather, if an east wind is prevailing; but for three years has enjoyed good health.

CASE IV.—Negress, age about 45 years; family history not known, general health formerly only medium; was re-

ferred to me in regard to impaired vision. Optic neuritis was present, with finally total loss of vision; her physician, she said, had removed masses from her nose and throat. Anterior and posterior rhinoscopy revealed a semi-opaque, greenish growth, extending from roof of the nasal chambers into the vault of pharynx, which grew rapidly occluding the vault, nares, and nasal chambers, causing exophthalmos expansions of the antrums encroaching upon the mouth and throat. Diagnosis, sarcoma. Death in about three months.

I will add also the record of the following cases of *adenoid growths*.

CASE V.—J. G. C., age 5 years, family history good, though of feeble health—catarrhal diathesis—(a typical case of lymphatism—Bosworth), had the characteristic symptoms of naso-pharyngitis with nasal stenosis and hypertrophic tonsils of fauces. Cod-liver oil with the iodides and iron and massage inunctions, astringent and disinfectant soothing, non-irritant astringent sprays, wrought a magic change for the better, with restoration, excepting the nasal stenosis and stertorous respiration. Parents now consent to a digital exploration of the posterior nares and vault. A large, spongy, adenoid growth is found obstructing partially the nares and vault. With the index finger the growth was freely lacerated and torn away with care; free hæmorrhage resulted, but not alarming.

CASE VI.—M. K. H., age 25 years, family history good; at present has feeble constitution. Neurasthenic, anæmic; has been afflicted with disease of upper air passages. Rhinoscopic examination reveals lower and middle turbinates hypertrophied, and an adenoid in the vault about the size of a lemon—soft, friable, elastic, fissured, and lobulated. With the right index finger, the growth is plowed into freely, and removed enucleated. The turbinates cauterized.

Antiseptic, astringent and soothing applications for two weeks, complete the local treatment. Blood and nerve tonics restored the patient to former health.

CASE VII.—M. P., age 6 years; family history good. Mother states has had a cold since birth. The child has snuffled, sneezed, cleared the throat, snores, and has never had natural respiration through the nose—is a mouth breather. Anterior rhinoscopy reveals hypertrophy of anterior turbinated processes. Digital examination reveals a hard, dense, and enlarged pharyngeal tonsil obstructing the

nares. This was crushed with Lœwenberg forceps. The turbinates chromicised; local antiseptic sprays for ten days' completed treatment.

Many patients with catarrhal inflammation, in fact, have not the so-called catarrh-rhino-pharyngitis as the primary disease, but preceding it are a polyp-adenoid growth, deflected septum, a fibroid, exostosis, polypoid hypertrophy of one or more of the turbinated processes, or chronic hypertrophy or adhesions of an hypertrophied turbinated process to the nasal septum, causing nasal stenosis, pressure symptoms, mouth-breathing, local and reflex irritations and passive congestion of the nasal chamber, pharynx, larynx, anterior, frontal, ethmoidal, and sphenoidal sinuses; and by removing the growth, the deformity, or cause of obstruction, the rhino-pharyngitis rapidly subsides, in some cases, without other local treatment; yet, in the *after-treatment* of most of the cases, the spray (DeVilbis'), as an auxiliary measure, with non-irritant, soothing, astringent, antiseptic medication, is of the greatest importance to restore the upper air-passages to their normal state.

Formerly, the successful treatment of diseases of upper air-passages was considered medical; but now, surgical measures have, and will continue to hold, the ascendancy over the latter; and in proportion to the ignoring of the nasal saw, drill, knife, scissors, snare, forceps, galvano-cautery, etc., etc., will the physician fail in treating diseases of the upper air-passages. In one patient, who had hypertrophies of the turbinated processes, there was on the left side adhesion of the middle and lower turbinated processes to the septum, almost completely obstructing the left nostril; the bony structure of the lower turbinated body had also undergone hypertrophy; a probe-pointed bistoury dissected the septum from the "processes;" then a nasal drill, attached to a dental engine, tunneled through the enlarged dense bony structure of the lower turbinated process three times, removing dense fibrous tissue and bone, giving free respiration through the left nostril. Cocaine locally, and whiskey internally, as anæsthetics, made the operation al-

most painless; besides, the operation is done so quick that the shock is very slight. The most thorough asepsis and antisepsis were used in every case, and the spray used every day, or every other day, until the wounds had healed.

Within a middle turbinated process, snared in an asthmatic patient in each concavity, was a small polyp the size of a pea, three in number, in addition to the polypoid growth on anterior extremity and middle half of the process.

ART. V.—Treatment and Management of Asthma.*

By THOMAS J. MAYS, M. D., of Philadelphia, Pa.

PROFESSOR OF DISEASES OF THE CHEST IN THE PHILADELPHIA POLYCLINIC, AND VISITING PHYSICIAN TO THE RUSH HOSPITAL FOR CONSUMPTION OF PHILADELPHIA.

Asthma is a paroxysmal disease of the pneumogastric nerve, which throws the muscular fibres of the bronchial tubes into spasmodic contraction. Its prominent symptoms are itching of the head and neck, oppression and tightness of the chest, dyspnœa, bloating of the abdomen, pain in the region of the diaphragm, cough, expectoration and fever.

Its causes are predisposing and exciting. (1) It may be inherited as asthma, and it may appear in children who come from consumptive or nervous families. It seems as if there is a predisposition necessary before the disease can develop. (2) Among the exciting causes are the inhalation of dust, powdered ipecacuanha, pollen of grasses and of roses, odor of certain animals, as cats, sheep, etc. It may also be due to reflex excitation coming from the nose, stomach, liver, intestines, uterus, etc. Its relation to hay fever is very close. Practically there is no difference between the two. I find that that which relieves the one will also relieve the other.

Its *treatment* resolves itself into that (1) which aims to give immediate relief from the paroxysm, and (2) that which aims to prevent a recurrence of the paroxysm.

Those *remedies which relieve the paroxysms* may be classified

*An abstract of a Lecture delivered to the class in the Philadelphia Polyclinic, November, 1892.

as follows: (1) Central narcotics, consisting of morphine, belladonna, stramonium, hyoscyamus, tobacco, chloroform, ether, bromide of ethyl, etc.; (2) Emetics, consisting of lobelia, ipecacuanha, sanguinaria, etc.; and (3) the *peripheral narcotics* or relaxants, consisting of nitro-glycerine, amyl nitrite, sodium nitrite, pilocarpine, etc.

Now, all our more or less powerful therapeutic agents are stimulants to the general or special bodily tissues which they affect, in small doses, while in large doses they paralyze the same. All the above-named agents only relieve asthma when given in large or paralyzing doses—the central narcotics exerting their influence on the central nervous system; the emetics acting on the pneumogastric filaments, while the peripheral narcotics paralyze the vaso-motor or sympathetic nerves which supply the unstriated muscular fibres of the bronchial mucous membrane and blood-vessels. While all these agents relieve asthma, and indeed in some cases are indispensable, it is quite clear that in doing so they lower or depress the functions of the parts on which they act, and that they do not therefore come up to the ideal of an asthmatic remedy. The best among them are nitro-glycerine, one or two minims of a one per cent. solution every three or four hours, by the mouth, and one-twentieth or one-tenth of a grain of morphine, hypodermically, once or twice a day.

What, then, is the remedy which may be given continuously for the alleviation of this disease, and without the undesirable effects of the above-named classes? Which drug will relieve asthma in stimulant doses? Such a drug, I believe, we possess in *strychnine*. Of course we must bear in mind that all stimulants are only supplementary agents which maintain the functions of the body without adding any direct material support to the same; but there is also good reason for believing that they cause the tissues to appropriate a larger amount of nutritive material than they would otherwise do; and in this way our stimulant drugs become tissue-builders. It has been shown that the power of strychnine in this respect is greater than that of any

other stimulant. This drug has a special affinity for the nervous system, which action is especially accentuated in the respiratory centre and pneumogastric nerves. In stimulant doses it gives a supporting influence to the respiratory movements; unlike morphine, lobelia, belladonna or nitroglycerine, it does not depress or narcotize the nervous system.

Asthma being a spasmodic disease, in what manner does strychnine bring relief? How does it act as an antispasmodic? The most probable theory of the spasmodic state is that there is at the beginning of the paroxysm a superabundant discharge of nerve force, through the pneumogastric nerves, which throws the bronchial muscles into contraction. But whatever the intimate nature of this condition may be, it is evidence of nerve degradation, or nerve weakness; and strychnine, by elevating the tone of these nerves, increases the controlling power of the same.

A stimulant dose of strychnine will depend on the age of the patient, and the length of time during which the drug has been given—although asthmatics, as a rule, will bear larger doses of strychnine than most other patients. Begin, as a rule, with one-thirtieth of a grain subcutaneously once a day, and gradually increase to one-twentieth or to one-tenth of a grain, or more, if necessary, to impress the system with its full stimulant effects. Do not waste your time with small doses.

To these amounts of strychnine small doses of from one-four-hundredth to one-six-hundredth of a grain of atropine may be added. It is best to administer these drugs in the evening, because asthma is nocturnal in its attacks, and your patient should be protected at night so he can sleep. Additionally to its hypodermic use this drug may be given in the following combination:

R Phenacetini. gr. lxiv
 Quiniæ sulph. gr. xxxij
 Ammon. murias. ʒi ss
 Pulv. capsici gr. iv
 Strychniæ sulph. gr. i ½

M. Fit. capsules No. xxxij.

Sig.: One capsule four times a day.

Or in the following :

R. Strychniæ sulph.....gr. i½
 Syr. acidi hydriodici.....
 Syr. hyposulph.....āā flʒij

M. Sig. : One teaspoonful four times daily.

In fact, light cases of asthma require no hypodermic injection, and do well enough when the above-named preparations are given. In severe cases it is, of course, advisable to add morphine or nitro glycerine to the strychnine and atropine treatment, especially at the beginning. This treatment will break up the paroxysms.

But even after they are broken many old asthmatics still remain in the most abject misery. They may be compelled to sit up day and night panting for breath, and still labor under the impression that they are suffering from asthma. This is a mistake. It is not asthma, but the natural state of exhaustion which follows asthma. The respiratory movements, as well as the whole nervous system, are almost completely paralyzed. It is the disorder and chaos following the flood. The dyspnœa is not paroxysmal as before, but is felt now on the slightest exertion.

This stage of the disease is most important from a therapeutic standpoint. Nitro-glycerine, lobelia, and other narcotics are of no use. Rest is most essential now. The patients must do absolutely nothing. Lie down if they can, or sit still. They should even be fed. I have known patients who were breathing comfortably bring on a most severe exhaustion-dyspnœa by merely undertaking to write a letter. During the rest treatment give food of the most nourishing character, such as freshly expressed beef juice, a cupful a day, beef-powder, beef, mutton, milk, oysters, clams, etc. In this stage strychnine is also of the greatest value. Massaging is also to be used in desperate cases. Electricity is also of great service. So are rarified air, and calisthenic exercises obtained in the pneumatic cabinet treatment. To procure sleep at night morphine may be added to the hypodermic injections of strychnine.

Success in treating asthma depends as much on the proper

management of the individual as it does on the administration of drugs in the proper doses and at the proper time. Principles can only be carried out by giving attention to details; hence each patient must be under the complete control of his physician in regard to his food, medicines, exercises, and everything else. This pertains particularly to old asthmatics who are constant sufferers.

If the instruction just given is closely followed there are very few cases which will not yield to it; and as an illustration of what may be done in desperate cases, I will conclude by relating the condensed histories of the two following examples, the second of which is still under occasional observation:

Case I. A——, aged 46, a sufferer from asthma for thirty-five years—the attacks becoming more frequent and severe during the last three years. For four weeks before coming under observation he had been unable to lie down on account of his disease. The injection of strychnine, grain one-twenty-fifth, and morphine, grain one-fifteenth, gave him almost immediate temporary relief. The morphine was discontinued after the second day, and one minim of a one p. c. sol. of nitro-glycerine every four hours was substituted. The strychnine was gradually increased, and the nitro-glycerine omitted in the course of a week. Additionally he was kept quiet, received nourishing food and strychnine by the mouth. In three days he was able to lie down, and in ten days more his asthma ceased.

Case II. B——, aged 50, an asthmatic for twenty-five years. Daily attacks for one year, during which time he had been unable to lie down day or night. Came under observation six weeks ago, and received about the same treatment as the previous case. The relief was prompt after each injection, but this had to be continued nightly for five weeks to keep the stubborn disease in abeyance. In two weeks he was able to lie down, and is now practically well.

1829 Spruce Street.

ART. VI.—Artificial Bone Foramen as Aids to Nutrition and Development in Some Diseased States—First Application to the Foramen of the Skull in a New Form of Baldness.

By HENRY V. GRAY, M. D., of Roanoke, Va

In the *Transactions of the Dermatological Association*, Drs. Morrow and Bulkley speak of the treatment of alopecia areata. The former attempts to restore the hair by mild counter-irritant action, continued sufficiently long to bring about a moderate dermatitis. Dr. Bulkley applies a 95 per cent. strength of carbolic acid, using small skin areas, two or three square inches, at each sitting, allowing several days to elapse between the applications. Static electricity, also, claims a share of attention, and numberless are the hair lotions and tonics for the restoration of the hair.

A plausible doubt is entertained as to any permanent good coming out of these various measures. Certainly, among my patients and acquaintances, I have never known a single instance where the hair has been restored, save in cases of baldness following fevers and scalp eruptions.

Before entering upon this subject in the light of suggestion and experiment, it would not be irrelevant to make a requisition upon our text-books for a brief of their teachings.

We are taught that the hair of the human scalp is not a unit, but that each hair has its own system—bulb, follicle, and shaft, and that there is an inversion of the integument, the epidermis forming a "*root-sheath*." At the base of the hair-follicle, there is a small papilla, well supplied with blood-vessels and nerves, the papilla pili. There is also connected with follicle and bulb, muscular tufts, which act as little muscles (levator papilli), and sebaceous or oil-glands. The shaft of each hair is hollow from the bulb to near its extremity.

We can now see where the great dramatist was not indicting a meaningless sentence when he says, "that each hair stood on end like quills upon the fretful porcupine."

The hair is placed upon the head to protect it from chill or excessive heat. The custom of the day is to cut short, and even shave the hairy scalp. Any one at all familiar with its nourishment and growth must condemn this custom, which will, in time, seriously affect both hair and health of those who willingly but ignorantly lend themselves to it. The nourishment runs out the open tube.

Feeling that we have gained some little information thus far, we will look ahead for more light.

We are told that the medullary substance of the hair has pigment-cells and air-globules, and that upon this relationship is the color of the hair determined.

Again, Flint says: "Hairs are very elastic, being made strongly so by friction, and that they are endowed with electricity, but of a negative nature. We have all recognized this electric endowment of the hair, both in the human being and in some animals, particularly the cat. Some people have much more electricity, both in the hair and body, than others, and their temperaments are greatly disturbed by changes in the weather, particularly strong eastern winds loaded with moisture. The preacher, the doctor, lawyer, and all nervo-intellectual persons, are affected; some, somniferous and lethargic; others, insomniferous and peevish.

The reader must recognize that any part of the human body, with such sensitive endowment, must likewise be subject to degeneration and loss; that its systems have all the essentials necessary for growth and nourishment; and when the latter is disturbed in any way, the proper compensation ceases.

Alopecia or baldness being our theme, it is useless to pass over the old beaten track, or to enter into its many phases and kinds

I shall speak of a new kind of baldness—one never spoken of before, or brought before the scrutiny of medical literature, to my knowledge, alopecia obstructive and absens. This form of baldness is due entirely to obstruction or absence of the nutrient foramen of the skull, particularly the parietal foramen.

I am especially indebted to Dr. Barton's contribution upon the Parietal Foramen, in the *Virginia Medical Monthly*, for his statistics upon percentage of absence of this foramen in his examination of 125 human skulls. This foramen was absent on both sides of the skull, 17 out of 125, and 27 on one side or the other. This led me to enter into an investigation, and although limited, it is accurate as far as it goes, and will, doubtless, lead to farther and deeper research by our dermatological brothers or specialists.

I have examined recently some fifty or more bald-headed people, excluding the syphilitic, senile, parasitic, etc., but respecting the congenital and middle-aged. I find in these examinations that the baldness (men being the subjects) was uniform, the entire parietal bone surface being devoid of hair from forehead to external occipital protuberance (ending in a V shape), and about one inch above pavilion of ear. This shape was uniform in a majority of cases. In some twenty of these subjects, the hair was sufficiently profuse on one parietal side, having grown sufficiently in length to be thrown across the top of the head with a view of hiding the baldness on opposite side. I claim that, in a majority of these cases, the baldness was due to absence (entire or in part) of the parietal foramen, excepting the varieties already mentioned. If this be true, then the profession is in a position to adopt the operation. I propose to overcome this form of baldness—alopecia obstructive or absens—parietal foramen.

I have no diagnostic or pathognomonic sign to give you to determine this form. I know of no way of determining but by exclusion. The true sign will have to be determined by future post-mortems or by those who will lend themselves to science—possibly the old bachelor.

This form of baldness, being due to obstruction or absence of the foramen, we can all understand that its restoration and system of nutrition will probably restore the lost hair in whole or in part to the naked scalp. The

system here spoken of is nerve, artery, vein, lymphatics, and all essential parts necessary to nutrition. We do not mean simply a sufficient supply of blood to the hairless scalp, but a *system* whereby nourishment is furnished. This can only spring from a foramen coming from the bone itself, to give aid to the weakened vitality of the bulb and its system. Of course, if the *hair bulb system* is entirely dead, I doubt very much the restoration of the hair under any circumstances.

The operation I propose is very simple, and should be distinctly antiseptic. If the health of the party is fair, a few points on scalp areas are selected. The integument is incised and opened so as to expose the bone, taking care not to injure the periosteum. Make the foramen as near the site of the natural foramen (parietal) as possible. I should think the best way to make the foramen would be with the little engine and drill, such as the dentist uses. You can open into diploëic structure, or even internal table, if necessary. The integumental wound being but a trifle, it will hardly be necessary to close it, as in many cases there is too much induration and tightness; static electricity and counter-irritants may now be used with good results. In fact, static-electricity (sparks applied to the head), and counter-irritants could precede advantageously the operation, and such measures and means as will invite blood to the parts.

Whilst the theory advanced in this contribution is purely speculative, I am flattered to believe it is in accord with sound scientific truth, and hope it may yield good results. The idea of making an artificial foramen is to give nature a chance to organize a new nutrient centre and system, to supply waste and give aid to the feeble and struggling tissues contiguous. The value of excitation to the parts, with the view of inviting blood, must be obvious to the most careless observer, and will reveal much to the experimental scientist.

ART. VII—A Manipulative Mistake and Its Consequences.***By GEORGE ROSS, M. D., of Richmond, Va.**

CHIEF SURGEON R. & D. R. R. Co.; RECENTLY VICE-PRESIDENT NATIONAL ASSOCIATION OF RAILWAY SURGEONS, ETC.

It is with no expectation of enlightening this body of distinguished medical men that I briefly present a case illustrative of a "Manipulative Mistake and its Consequences," but rather with the purpose of impressing the importance of vigilance and care in the simplest and most common surgical procedure. It may not be unseemly that I apologize for consuming even a few moments of the time of this Association in the bare mention of an accident primarily so simple; but its novelty and serious results have seemed to be sufficient justification for placing it on record as a possibility hardly likely to be duplicated during the life of any of those to whom I address myself.

It was ten years ago that, as consultant, I came to know Mrs W——, of Richmond, Va., my aid being sought by her physician in his efforts to relieve her of a long standing "dysmenorrhœa." She was a perfectly formed woman; had been married two years; had never conceived, and eliminating this trouble and an occasional attack of "vesical irritation," was perfectly healthy. Her physician had already administered the usual constitutional remedies prescribed in such conditions, nothing bettering her; and having inherited her from another physician, at whose hands she had received local treatment, he was specially solicitous for her recovery. A specular examination at once revealed "cervical flexion" with "stenosis," demanding and receiving "divulsion," followed by hot douche and glycerine tampons. Relief of the "dysmenorrhœa" was the immediate consequence, and conception followed within the year. I was retained for the accouchment, and delivered her under chloroform, after a painful and protracted labor, of a male infant. Then began the pronounced attack of "vesical irritation," of which she had had mutterings during her gestation and previously. For its relief she generally found solace in some domestic remedy. Occasionally my aid was

*Read before the Southern Surgical and Gynæcological Association in Louisville, November 16, 1892.

involved, when a few doses of some alkaline diuretic, supplemented by rest in the horizontal posture, would rout the enemy.

Two years passed and another baby came—this time without difficulty or complication. She had a normal “getting up,” nursed her baby, and was apparently well. But the old enemy was still in ambush, and declared itself a power for bringing distress on its victim at varying intervals. Frequent examinations of urine showed the kidneys to be sound. The patient’s appetite was always good, digestion perfect, never a fever. Why the vesical pain, often vesical agony? Could it be stone? The sound said No! Could it be an irritable caruncle, or a fissure at the vesical neck? Ocular inspection and urethral dilatation said No! “Acute cystitis” was a suspicion, but there was no fever and no hypogastric tenderness. She was deluged with the full gamut of diuretics and lithia water and sweet milk and hot vaginal douches, and enforced rest, and relief would come; but temporary relief only.

Pregnancy again became a factor to mark the symptoms and exaggerate the patient’s discomfort. A third boy saw the light without unusual incident. Convalescence was prompt and satisfactory, but hardly established, before a vesical explosion took place, this time more terrible than ever, and palliated only by frequent administration of morphia. Day and night it went on—this unremitting, agonizing tenesmus. Drop by drop the urine flowed, at last only to find exit through a soft catheter, which she was taught to use, and through which antiseptic and sedative douches were applied to the viscus. Then it became impossible for her to insert the catheter; some immovable obstruction was present, and I was obliged to go to her rescue. I had no difficulty in sliding the instrument along the floor of the urethra and bringing away a full flow of alkaline urine. Why her embarrassment, and why the tormenting, agonizing straining, so unceasing and so violent as to force the uterine os to the very verge of the fourchette? Days dragged despairingly along, and nights brought no surcease of sorrow and suffering. Could a human being endure such unremitting torture and live? Courage! brave Christian woman! The day dawn was breaking. Make yet one other mighty effort, and a thankful “Eureka!” shall be my greeting at the early morning visit. Exultantly she pointed me to a vessel in which had been placed the “mass,” which for seven years she had carried in her bladder, that made her

life so miserable. I wondered what its constituent elements could be, and inspected to find—what? A pledget of absorbent cotton, once saturated with iodine; in shape, a truncated cone, and thinly incrustated with phosphate of lime. How did it get there, you ask? It was impossible for her to have introduced it, even if she had desired to do so. She believed it to have been the work of her first physician, when attempting to apply his intra-uterine dressing, mistaking the urethra for the “cervical canal.” He was an *unmarried* man, she said, and his successor being a *married* man would surely have known the difference between the urethra and vagina. Its expulsion was followed by a slight hæmorrhage, the result of a mere scratch of the urethral mucous membrane by the phosphate shell, and its consequences were most grievous. Two days of rest and peace and sweet refreshing sleep were passed, and then a chill, a fearful chill and fever and sweat, to be followed by another and another during that and succeeding days. Purulent absorption had taken place at the sight of that scratch, and now pyæmia was monarch. Scylla was escaped; Charibdis was likely to wreck our frail and long tossed human bark. Two weeks of constant watching and waiting and nursing were passed, and my patient had responded to the abundant food and stimulants and quinine and sulphocarbolate of soda and antiseptic douches, with which she was saturated and kept clean. She was well again, as well as one might reasonably hope to be after so severe and protracted an illness. But, alas, for the presence of that long resident, fleecy foreigner in the bladder, a persistent “chronic cystitis” was engendered, and notwithstanding the faithful and continuous exhibition of extracts of pichi and corn silk and pareira, and buchu and copaiva, and santal oil, and iron and drainage, “*et id omne genus*,” she still suffers from it, and the end is not yet.

Bromo Soda.—I have used Warner & Co.’s Bromo Soda repeatedly in cases of nervous headache and mental depression, and in every case I have seen a favorable result. Am now prescribing it in one case in which I have used almost every conceivable remedy.

F. H. CLARK, M. D., Brooklyn, New York.

Clinical Reports.

A Case of Right-Sided Homonymous Hemianopsia.

By JOHN HERBERT CLAIBORNE, Jr., M. D., of New York, N. Y.,

LECTURER ON OPHTHALMOLOGY NEW YORK POLYCLINIC.

Miss M. T., age 21 years, presented herself for treatment and advice at my office on the 31st of August, 1891. She stated that two weeks before, on passing across a short platform, on the way from the cars to the boat, she became suddenly dizzy and somewhat indifferent to her surroundings. She also noticed, in a few moments, that her vision was impaired, and that she could see nothing on her right. But she managed to find her way into the cars, and to take a seat. She was on the cars six hours, and during that time she also felt numb on her right side. She has imperfect recollection of her ride; remembers that the numbness continued, and that she was unable to understand the conductor perfectly. She was alone, but was met by her mother at the depot on arriving in New York.

Her mother states that she was somewhat flushed in the face, and apparently excited and hysterical. She regained her sensibility on the numb side immediately after reaching home, it having persisted without change since she first noticed it about six hours before. She remained somewhat hysterical the night of her arrival.

I saw her two weeks after this date. Her memory had then been getting gradually better, she thought.

At the present date, November, 1892, her mother, and she herself, state that her memory is not what it was, and that she forgets to do things, and also forgets the location of many things which she puts away. When I first saw her, in addition to defective memory, she had slight headache, and had had it fairly constantly since her attack.

She was an extraordinarily well-built young woman, of fine appearance and apparent strength. She had a good color, clear skin, and neck of ordinary length. Her physical condition to-day differs in no respect from that of twelve or more months ago. Her appetite was at all times good, and still remains so. There was no loss of sensibility on the right or left when I saw her, and her grip was strong and firm in each hand.

Atropine was dropped into each eye, and the fundus ex-

amined. The *right optic disc* was apparently slightly hazy, and could be seen best with +5D. There was nothing else abnormal.

Left optic disc was seen best with a 3D., and was apparently normal.

At the end of a week, I could detect no haziness in right disc. The right half of each field of vision was entirely blind, and she was under the impression, when both eyes were open, that she was totally blind in the right eye. She was easily convinced of her error by making her close her left eye. The division of the field in each eye was vertical, and in the case of the left eye the blind line failed to reach the macula. I was never convinced about the position of the blind line in the right eye, as the patient exhibited great nervousness and apparent inability to fix her attention, for any length of time, upon a given point. After the atropine had worn off, I found the right disc could be seen best with +3D., and the left disc with +1D. The difference between the observations before and after the use of atropine was, in all probability, due to the use of this drug. There was a haziness, I am sure, around the right disc at first, but, as stated, this disappeared in a week's time. I think it therefore improbable that there was optic neuritis.

The only symptoms that have persisted since the attack is the hemianopsia and slight deterioration in memory. She has occasional headaches, but I believe they are due to her uncorrected hyperopia, which she positively declines to have corrected.

Her vision in the right eye at present is $\frac{15}{20}$; in the left eye is $\frac{15}{40}$. No improvement can be made in either eye with glasses. By a curious oversight, I failed to take her vision at her first appearance; hence I cannot compare it with the present vision. Suffice it to say, she has generally been of the opinion that her left eye is perfectly good and her right one of no account.

With the left eye she reads Jæger No. 1 with ease. With the right eye she reads Jæger No. 2 with +2.5D., but with considerable difficulty.

I have cast about in vain to find a cause for this attack. Her father and mother are both strong and healthy. She has a brother who wears a glass correcting a slight myopic astigmatism. She was not constipated at the time of her attack, and her digestion has always been good. She has never had any trouble before or since her attack with her

menstrual function. She was returning from a vacation in russet-brown health when the attack came on. During the summer, she had played tennis considerably. Beyond this and dancing, she had engaged in no exhausting exercise.

Let the cause rest, the lamentable fact remains that she has slightly impaired memory, and can see nothing to her right.

The location of the lesion in the brain adds to the interest of the case.

It will be remembered that the fibres of the optic tracts decussate at the chiasm, the outer fibres of the left tract supplying the outer side of the left retina, and the inner fibres of the left tract supplying the inner side of the right retina. So that the left half of the retina of each eye is supplied by the left optic tract. Hence the right half of the field of vision of each eye is furnished by the sensitiveness of the left half of each retina. If, therefore, the left half of each retina is insensitive to light, the right half of each field of vision will be lacking—that is, there will be blindness on the right side for each eye.

It follows, then, that the right optic tract supplies the right half of each retina, and that insensitiveness of the right half of each retina will produce blindness in the left half of the field of vision of each eye. Now, when the lesion is immediately behind the chiasm, and does not encroach upon the region of the crus cerebri, the symptoms present will be confined to right-sided or left-sided blindness. A lesion, of course, in the left optic tract will cause right-sided blindness in each eye, and a lesion in the right optic tract will cause left-sided blindness in each eye. Since the blindness in the case before us was right-sided in each eye, it follows that the lesion was somewhere in the left optic tract. If the lesion occurs in the optic tract as it curves around the crus, the cause which produces disintegration of the fibres of the tract is likely to affect the motor tract as it enters the crus, or it may affect the third nerve as it comes out of the crus. If the lesion, then, in our case had occur-

red at the point above named, blindness of the right side in each eye would have been associated with hemiplegia of the right side, and possibly a paralysis of the third nerve on the left side. It will be seen, then, that the blindness and the hemiplegia would be on the side opposite to the lesion, and the paralysis of the third nerve on the side corresponding to the lesion.

If the lesion were situated in the tract as it runs in the optic thalamus, in all probability it would affect the sensory tract from the opposite side of the body. This, it will be remembered, was the fact in our case. Hemianæsthesia of a fleeting character on the right side was associated with right-sided blindness.

If the optic tract in the internal capsule had been disintegrated by a lesion in the internal capsule or basal ganglia, it is very probable there would have been right-sided blindness, hemianæsthesia, and hemiplegia. Such was not the fact in our case.

If the lesion had been in the radiating fibres, simple right-sided blindness would have resulted. If it had been in the optic tract, within the cortex or occipital lobe, the same result would have been found.

It seems, then, from the foregoing, that the lesion in the case of Miss M. T. was in the optic thalamus, and it must have been of such a character as to press for awhile upon the sensory tract from the opposite side of the body. That the effect upon the sensory fibres was of a mechanical nature is rendered highly probable by its ephemeral duration, It disappeared in about six weeks.

Treatment has failed to produce any effect upon the blindness, and the hemianæsthesia disappeared of itself. The iodide of potassium was exhibited in dosage as high as 30 grains three times a day. No other treatment has been employed. The case will probably remain *in statu quo*.

The terms hemiopia and hemianopsia seem to be used indifferently by many in illustration of the condition herein described. It must be clear to any one with a knowledge

of Greek that the term *hemianopsia* should be applied to the blind field, and the term *hemiopia* to the seeing field. For the existence of the *à* privative (*hemi-a-nopsia*) indicates the *not seeing*.

The case cited, then, is one of right-sided homonymous hemianopsia, because the blindness is on the right side or it is a case of left-sided homonymous hemiopia, because the vision is on the left side.

It would be well to lay aside the term *hemiopia* altogether and use the term *hemianopsia*. The blindness, therefore, is always on the side opposite to the lesion—the vision on the same side as the lesion.

For a long time a grave error existed in regard to the position of the visual centre in brain. It was taught that the angular gyrus was the visual centre.

In 1884, M. Allen Starr collected 27 cases of lesion in the occipital lobe by which he proved that the visual area was located there: 20 other cases have since been reported; and in 1886, Seguin drew the conclusion that the cuneus is the part of the occipital lobe in which the visual centre lies. The erstwhile conclusions of physiologists that the visual centre lay in the angular gyrus, was based upon experiments in monkeys. Whatever may be the facts in the case of monkeys, the work of Starr and Seguin have shown, beyond peradventure, that in man the visual centre lies in the cuneus in the occipital lobe.

Peacock's Bromides.

Dr. Edwin Douglas Webb, of Washington, D. C., writes that he has prescribed it in nervous prostration, intestinal indigestion and dyspepsia with admirable results, and is yet to be disappointed in it, when indicated as a tonic and nerve sedative.

Proceedings of Societies, Boards, etc.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

The Fifth Annual Session was called to order at 10:30 A. M., November 15th, 1892, in the City Hall of Louisville, Ky., by the President, Dr. J. McFadden Gaston, of Atlanta, Ga.; Dr. W. E. B. Davis, of Birmingham, Ala., Secretary, was at his desk.

Ex-President of the Association, Dr. L. S. McMurtry, chairman of the Committee of Arrangements, etc., delivered a cordial *Address of Welcome*. In the Address, he remarked that it is particularly appropriate that this Association should assemble in Louisville, where one thousand students annually prepare themselves for the practice of medicine, chiefly in the Southern and Southwestern States. "Here was laid the foundation of abdominal surgery, upon which has been builded a superstructure surpassing the brightest anticipations of the pioneers. Here labored and taught and wrote Samuel D. Gross, and Austin Flint, and Henry Miller, in the prime of their active and brilliant careers."

The speaker then announced the social features of the Session: Luncheons, by Dr. and Mrs. Ap. Morgan Vance, by Dr. W. O. Roberts; Dinner, by Dr. L. S. McMurtry, and a Banquet by the physicians of the city.

Dr. Bedford Brown, of Alexandria, Va., read the first paper of the Session—*Personal Recollections of the Late Benjamin W. Dudley, of Lexington, Ky., and His Surgical Work*, which paper was made the more interesting by the fact that the speaker was a pupil of the great Kentucky Surgeon.

Dr. A. L. V. Brokaw, of St. Louis, Mo., read a paper giving his *Experiences in Pelvic Surgery*.

Dr. Cornelius Kollock, of Cheraw, S. C., presented the next paper, which took the ground that *Craniotomy upon the Living Fœtus is Not Justifiable*.

Dr. Wm. D. Haggard, of Nashville, Tenn., reported a **Case of Extensive Hæmatocele Resulting from Tubal Pregnancy, Rupturing into the Broad Ligament.**

A young lady, 24 years of age, jumped from an express wagon July 4. Her menses were past due. Shortly afterward, she was seized with pain in the lower abdominal region, followed by a slight flow from the vagina, which she supposed to be her menses. She refused a vaginal examination to several physicians who saw her.

On the twenty-ninth day after the accident, Dr. Haggard was called. He found the patient with a tender, non-fluctuating tumor above the pelvic brim, as large as a cocoanut. Meteorism; temperature, 103°F .; pulse, 120. Left lateral pelvic space was filled with the tumor, which extended into the hypogastrium; bloody discharge from the uterus; abdominal section was performed at St. Margaret's Hospital three days later; median incision; anterior wall of tumor adherent to parietal peritoneum, making the operation extra-peritoneal. Three pints of tarry, clotted blood were turned out of the sac, formed by the distended layers of the broad ligament, limiting the hematic tumor. Sac irrigated, sponged dry, drain-tube placed. Death occurred twelve hours after operation, which was explained by the following post-mortem appearances: Uterus enlarged, measuring antero-posteriorly $1\frac{1}{2}$ inches; transversely, $2\frac{3}{8}$; longitudinally, $5\frac{1}{2}$ inches. Entire abdominal viscera of deep modena color. Pelvic contents fused into a conglomerate mass. Tubes not recognizable. Rectum black and gangrenous, produced by blood dissecting around it, producing constriction and resulting mortification.

Upon microscopical examination of the endometrium, large embryonal cells, completely filling the spaces of a myxomatous reticulum, were found. The cells were clearly the so-called "decidual cells," having a round or oval shape and containing one or more nuclei: they varied in size, having a general average of about one-four-hundredths of an inch in diameter, or eight times the diameter of a red-blood corpuscle. Remnants of utricular glands were present, but not numerous. Although the fœtus was not found, that it was a case of tubal pregnancy, with rupture into the broad ligament, the writer thought was clearly established by the clinical history and post-mortem appearances, which were summarized as follows:

1. She confessed having had intra-pelvic trouble previously (presumably gonorrhœa), for which she was treated locally.

2. At the time of accident, her menses were past due. As to how long, her statements were misleading.

3. There was a fitful, yet bloody flow from the uterus during her entire illness.

4. Paroxysmal, colicky pains in the lower abdominal and pelvic regions, of frequent occurrence.

5. Existence of a tumor above the pubes, which she probably mistook for a gravid uterus. Consequently, she per-

sistently refused to submit to a digital examination, fearing the detection of her pregnant state.

Post-Mortem Appearances.—1. Enlarged and softened condition of the uterus with a patulous os, showing escape of a sero-sanguinolent, stringy fluid.

2. Enlargement of the left tube, with a well-defined cavity from which the fruit-sac escaped.

3. Existence of a deciduous membrane, as revealed by the microscope.

Abdominal Pregnancy.

The paper by Dr. Henry C. Coe, of New York, N. Y., was based upon a case in the practice of the author, in which the condition was not positively recognized before operation. The patient and her physician supposed that she was normally pregnant, as she had no unusual symptoms (except pain, hæmorrhage, and slight localized peritonitis during the third month), and presented a median abdominal tumor, which enlarged gradually and symmetrically. The foetal parts were indistinctly felt by external palpation, but neither the heart-beat nor movements could be detected after repeated examinations. Internal ballottement was absent, and the body of the uterus could not be mapped out. The condition was supposed by Dr. Coe, who saw the patient at full term, to be hydramnios with a dead foetus. As the abdomen continued to enlarge a month after the expected date of confinement, it was inferred that the patient had either abdominal pregnancy or an ovarian cyst. The former condition was found at the operation, a perfectly developed foetus being removed, which had probably been dead two or three months. The placenta was attached to the bottom of Douglas's pouch and the posterior surface of the uterus. The uterus and adnexa, as well as the abdominal viscera, were completely shut off from the sac, which was stitched into the wound and drained, a counter-opening being subsequently made in the posterior vaginal fornix. The patient recovered, subsequently had melancholia, and was sent to an asylum, from which she was discharged cured, the sinus at the site of the sac having entirely healed.

Dr. Coe called attention to the points of interest in the case, which he regarded as clearly one of retro-uterine gestation, secondary to rupture of a tubal sac. The diagnosis was rendered peculiarly difficult by the absence of the usual signs—*i. e.*, separation of the sac from the uterus, the

presence of an elastic mass filling Douglas's pouch (the placenta), unusual distinctness of the foetal parts on external palpation, and various pressure symptoms, due to the abnormal position of the foetus and placenta. He believed with Sutton, Tait, and other modern observers, that all cases of abdominal pregnancy were originally tubal. The diagnosis could only be positively made by establishing the fact that the uterus was empty, to do which the obstetrician should not hesitate to pass a sound after having exhausted other means of arriving at the truth.

Dr. Coe referred to certain *hydramnios*, with extreme flaccidity of the uterine wall, in which intermittent contractions were absent and the foetal parts appeared to be directly in contact with the abdominal wall. He had twice been called to operate for abdominal pregnancy where the patient was delivered *per vias naturales*. Abdominal section, at or near the end of pregnancy, was clearly the only method of treatment, whether the child was alive or dead. The practice of incising the sac through the vagina was dangerous and unsurgical. In draining, the making of a counter-opening through the cul-de-sac was advised.

Dr. S. M. Hogan, of Union Springs, Ala., read the report of a *Case of Fibroid Tumor of the Uterus, Complicated by Pregnancy; Rupture of the Uterus at the Fourth Month of Gestation—Operation Six Weeks Afterwards—Death*.

During the Afternoon, Dr. Geo. Ben. Johnston, of Richmond, Va., presented the title of a paper on *Some Kidney Operations—with Remarks*.

Dr. Chas. A. L. Reed, of Cincinnati, Ohio, read a paper on *Surgery of the Ureter*.

But the bulk of the Afternoon Session was taken up with discussion of *Herniæ* in its various forms—Dr. Henry O. Marcy, of Boston, Mass., Ex-President of the American Medical Association reading a paper on *Surgical Treatment of Inguinal Hernia in the Male*, illustrating his paper by some fine stereoptican views of cases of hernia operated upon; Dr. G. A. Baxter, of Chattanooga, Tenn., one describing *A New Operation for the Radical Cure of Inguinal Hernia*; and Dr. W. H. Wathen, of Louisville, Ky., one on *Treatment of Umbilical and Ventral Hernia*.

Dr. J. T. Wilson, of Sherman, Texas, reported *A Case of Poisoning by the Bite of the Southern Spider*.

SECOND DAY—*Morning*.—Dr. W. O. Roberts, of Louisville, Ky., read a paper on the *Treatment of Ununited Fractures*—citing a case which came under his care.

Dr. W. C. Dugan, of Louisville, Ky., read a paper on the **Symptoms of Fractures of the Skull—Their Importance and Significance.**

Then followed a discussion of fractures, particularly of the skull, in which a number participated, presenting notable cases that had come under their notice. Trephining for exploration was advocated by several, who claimed that such an operation, if properly performed, does not complicate the case.

Dr. W. W. Potter, of Buffalo, N. Y., called attention to the studies Mr. Trevan made more than twenty years ago, showing that the internal table of the skull suffers fracture first when the impact is sufficient. This is an important point in relation to diagnosis where there are any symptoms resulting.

Dr. Ap Morgan Vance, of Louisville, advocated opening not only the scalp, but the skull, for exploration in cases of doubt. The doctor said that he had heard, as a sort of tradition, about broken skulls being pieced out with silver plates, and never having met with a sample of such work, and believing it to be romance, he would like to have some light on the subject from those present.

No one, however, volunteered any information upon the point indicated.

Dr. G. A. Baxter, of Chattanooga, Tenn., opposed the views generally advanced, and counseled conservatism in trephining. He is against exploration, and thinks that operation should not be made in cases of doubt.

Dr. McIntyre, of St. Louis, Mo., cited a case in support of Dr. Dugan's paper.

Dr. L. S. McMurtry presented several tumors which he recently removed, and gave a very interesting history of the cases and the operations.

Intestinal Anastomosis by a New Device.

In this paper by Dr. H. Horace Grant, Professor of Surgery Hospital College Medicine of Louisville, Ky., reference was made to Abbé's suggestion of direct suture without plates of any kind, and to the necessity for a longer cut in the gut to avoid closure of the opening by a cicatricial contraction. It was insisted that direct suture was a tedious step, and could not be safely undertaken by the general surgeon, not previously trained in such work, with any expectation of completion in considerably over an hour, which was a dangerous expenditure of time. To secure opening

enough, and to guard against too great contraction, an elliptical anastomotic opening should be made, two inches long and one-fourth inch in transverse diameter. The opening may be then approximated by the plates of raw-hide, as now used and understood. Plates long enough to approximate four-inch incisions, as suggested by Abbé, would be unsafe, and almost unmanageable. To facilitate direct closure without any plates, a scissors cutting clamp was shown. The two blades are oval, the opening two and a quarter inches wide. A shoulder one eighth of an inch wide surrounds each blade. The arms of the blade allow full five inches introduction into the bowel, thus leaving one and a quarter to two inches of free ends for invagination. After the resection, the divided ends are held parallel, and the blade passed into each, and the clamp tightened. Now the two surfaces thus approximated are rapidly stitched together around the clamp by a continuous over-hand Lembert suture of fine silk. The suture is interrupted and tied every inch or so to insure approximation. Two rows of suture may be employed if it seems desirable. This work can be done far more rapidly than without the clamp. The clamp is now again tightened, if need be, and a long pair of dressing forceps passed into the bowel, and the plug removed or pushed in. The scissors action of the clamp and the pressure prevent all hæmorrhage. The clamp is now withdrawn, and ends invaginated in the usual way. This instrument can be used only after resection. It was the writer's belief that the oval opening, with two-inch plates, would offer the safest plan in anastomosis without resection, and that the clamp would be of great service after resection.

Dr. J. D. S. Davis, of Birmingham, Ala., presented a paper upon

Intestinal Anastomosis without Mechanical Devices and Circulo-Lateral Enterorrhaphy.

The author took the position that mechanical devices are not necessary in intestinal anastomosis. He approximates the intestines by means of the intra-loop suture and then protects these with an outside interrupted safety suture. The free ends are attached to the bowel by means of two or three interrupted sutures, and the mesenteric opening closed by placing a few interrupted sutures horizontal with the mesenteric blood vessels. The author claims that while it requires a little longer to make an anastomosis without

mechanical devices, it is just as good and avoids the necessity of placing foreign material inside of the intestines. In large openings on the convexity of the bowel, where he has been in the habit heretofore of using horseshoe cat-gut plates, he approximates in a hinge fashion the same way by means of the intra-loop suture, and protects them by the outside interrupted safety sutures. The author condemns all forms of circular and circulo-lateral enterorrhaphy, and he says that where anastomosis cannot be done, it is better to make an artificial anus than to do a circular enterorrhaphy, for it is impossible at any time to know that you will not have a perforation at the mesenteric approximation. While he demonstrates clearly that circulo-lateral enterorrhaphy in a large number of cases is successful, and is a very fascinating procedure, it is risky and not safe. He says that it is impossible to always make secure the mesenteric margin of the bowel, because the tissues are so frail that they will often tear from the slightest strain; and a second danger is in cutting off the blood supply and producing sloughing at the mesenteric margin.

The next paper was by Dr. Floyd W. McRae, of Atlanta, Ga., on *Stone in the Bladder, with Report of Cases*.

Dr. L. S. McMurtry, of Louisville, Ky., reported a case of *Ovarian Cystotomy with Twisted Pedicle and Peritonitis; Ovariectomy during the second week of Typhoid Fever. Recovery*.

Dr. Howard A. Kelley, of Baltimore, Md., read a paper, which was illustrated by drawings and specimens, showing the *Morphology of Abdominal Tumors*.

The title of the paper presented by Dr. B. E. Hardra, of Galveston, Tex., was *Surgico-Electrical Treatment of Epilepsy*.

Dr. Ap Vance Morgan, of Louisville, Ky., made a *Plea for More Rapid Surgical Work*.

During the afternoon, Dr. Henry O. Marcy, of Boston, Mass., demonstrated his method of using the bedded kangaroo-tail tendon in operation for hernia upon a private patient at St. Joseph's Infirmary.

Cure of Inguinal Hernia in the Male.

Dr. Henry O. Marcy, of Boston, who is widely known as a surgical authority and a special contributor upon the subject of hernia, read an interesting and valuable paper upon this subject. He offered as the special reason for the introduction of this subject the fact, that this variety of hernia is still considered by the larger number of surgeons of such extreme difficulty of cure that surgical measures are to be

advised only very exceptionally, when the integrity of the intestine is not endangered. Dr. Marcy dwelt at considerable length upon the anatomical construction of the parts involved, emphasizing the normal obliquity of the inguinal canal, which, although always sufficiently patent to allow free mobility of the cord and its vessels, was so disposed that the intra-abdominal pressure in every position of the body was ever maintained at right angles to its long axis, keeping its walls in apposition, analogous to the entrance of the ureter into the bladder. This was demonstrated by a large number of photographic illustrations of carefully prepared anatomical dissections, projected upon the screen, showing the normal relation of the parts, and especially emphasizing the structures which make up the posterior wall of the inguinal canal. The author pointed out the incipient changes incident to inguinal hernia, and traced the pathological conditions which ensue as the disease becomes pronounced, showing that these were always in ratio with the departure from the normal line of the inguinal canal, which causes a deflection of the intra-abdominal pressure, so that finally it falls in the line of the opening instead of at a right angle to it.

The problem, therefore, presented to the surgeon in the cure of inguinal hernia, is the reconstruction of the canal to its normal condition. Until a very recent period this had never been attempted, or even considered within a safe surgical limit, and it is easy to understand, without special demonstration, that the closure of the structures which make up the abdominal wall external to the canal, must ever leave a wide funnel-shaped opening in the line of the intra-abdominal pressure, thereby inviting a return of the hernia, and hence the failure to cure.

The reconstruction of the posterior wall of the inguinal canal is rendered possible by aseptic surgery and the use of buried animal sutures. The first permits a free and safe dissection of the parts, while by the proper use of the tendon sutures, the posterior wall of the canal may be restored, strengthened, and re-enforced, and the lower border of the internal ring is narrowed and quite closed in upon the cord. Before doing this, when the peritoneal sac is at all large, it is to be enucleated to its very base after being put upon tension, ligated, or sutured and resected. The coaptation of the deep structures is conveniently effected by a line of deep double sutures, or a row of running sutures taken deeply through the tissues from side to side. The cord is then re-

placed, and the external structures are coaptated in a similar manner by a row of sutures taken through Poupart's ligament and the conjoined tendon, closing the structures quite down upon the cord, and thus restoring the external ring. The superficial structures are coaptated and joined by continuous sutures.

"In a similar manner the skin is closed by a continuous buried tendon suture. The needle, straight or curved, is best held in the fingers, and is carried through the deep layer of the skin, entering the wound upon the other side at a point exactly opposite the emergence of the last stitch. I have called this the *parallel suture*, since the needle is carried through the skin parallel to the line of the incision. It will be noted, however, when the points of entrance and emergence are exactly opposite, that the suture lies in the wound transversely, and if, for purpose of demonstration, the wound is allowed to remain only partially closed, the suture lies in parallel lines, like the rounds of a ladder, at right angles to the long axis of the wound."

Dr. Marcy dries the wound carefully, dusts with iodoform or aristol, and hermetically seals it with iodoform collodion, re-enforced by a few fibres of cotton. An aseptic wound thus treated must remain aseptic, emphasized by the author as follows: "*The sine qua non*," otherwise failure must ensue. "*Aseptic sutures, aseptically applied, in an aseptic wound, aseptically maintained.*"

Dr. Marcy believes these conditions should be accepted as axiomatic in all wounds made in aseptic structures, but that they apply with even greater force to hernia than probably to any other operation, since an unclosed wound necessitates drainage and protective dressings, and wounds of the groin are confessedly the most difficult of all to maintain aseptic.

Dr. Marcy called attention to another important advantage derived from the use of the aseptic animal suture when properly prepared and buried in the tissues. The histological changes which supervene have been demonstrated to consist in the proliferation of leucocytes which invade more or less rapidly the suture material, becoming themselves transformed into connective tissue cells, and ultimately, in a measure, replacing the suture with a band of living connective tissue.

These changes were first noticed to supervene about the animal ligature when applied to the larger vessels, and several years ago Dr. Marcy instituted a series of comparative

studies upon animals, and demonstrated that similar changes ensued along the line of aseptic animal sutures when buried in well-vitalized structures. These conditions themselves emphasize the superiority of tendon sutures, since silk, when aseptic, is encapsuled, and never replaced by normal structures. •

Dr. Marcy regretted the impossibility of treating the subject *in extenso*, but referred to his work upon the "*Anatomy and Surgical Treatment of Hernia*," just published by the Appletons,* where the subject is fully discussed.

At the same time and place, Dr. W. H. Wathen, of Louisville, Ky., performed a laparotomy, and gave Dr. Howard A. Kelley, of Baltimore, Md., an opportunity to demonstrate his method of hysterorrhaphy.

On assembling of the *afternoon session*, the President's Address was the first order of business.

Compatibility of Conservative and Aggressive Surgery

Was the title of the Address by the President, Dr. J. McFadden Gaston, of Atlanta, Ga. He stated that it was his purpose to make a *distinction between rashness in the employment of operative measures and boldness in the use of surgical means* when clearly indicated.

As a preliminary to any radical surgical procedure, correct diagnosis is essential; but to accomplish a proper understanding of a deep seated disorder, it is often requisite to make an exploratory operation. The information based upon such exploratory measure serves as a guide to further surgical procedure. The prime consideration in exploratory operations is to be sure that the existing disorders shall not be aggravated by such procedure, nor that other graver developments shall be induced as a consequence of it.

In keeping with this precaution against the abuse of exploratory measures, it is proper to exercise great discrimination in the use of antiseptics in surgery. A most salutary result may be obtained by employing very active germicides in a case of septic contamination, whereas the same application may not be suited to an operation upon tissues in their normal state. Certain preparations tend to destroy pyogenic organisms, and when they exist their use is indicated. On the other hand, a resort to these germicidal agents, when pyogenic organisms are not present, operates

* *Anatomy and Surgical Treatment of Hernia*. Quarto, with 66 full-size illustrations. Pp. 421+. By Henry O. Marcy, A. M., M. D., LL. D., of Boston.

unfavorably upon the healthy structure. The re-action in the practice of many surgeons of large experience from observing the absolutely hurtful effects of the ordinary solutions of corrosive sublimate, when brought in contact with the absorbent surfaces of normal structures, is tending to a limitation of this poisonous substance to external use.

There are many germicidal applications far safer than corrosive sublimate, which meet all the requirements in surgery, and the day is not far distant when the use of the solutions of corrosive sublimate will be excluded from operations upon incised healthy structures. There is a gradual movement of the pendulum of antiseptics towards asepsis, and it is found that sterilized water is the safest and best wash for surfaces not contaminated by previous septic developments in their tissues. Antiseptics has a legitimate field of use in surgery; but great detriment to proper antiseptic treatment has ensued from the indiscriminate application of solutions of corrosive sublimate.

No surgical operation of magnitude should be undertaken without knowing the habits of the patient. He adverts to a fact overlooked by many operators, in regard to the importance of continuing the use of any stimulant or narcotic to which the patient has long been accustomed. Within his experience, the interruption even of the tobacco habit has been followed by troublesome nervous depression, after operations, and the resumption of its use has afforded complete and prompt relief. A patient addicted to alcoholic drinks for a considerable period before a surgical operation cannot have it suddenly abstracted without great disturbance of the entire nervous system. If he does not reach delirium tremens, there will still be such derangement of all the functions as to interfere materially with proper nutrition, which may pave the way to serious complications in the after-treatment. It is, hence, essential, under such circumstances, to take into account the previous habit, and continue to give certain quantities of the alcoholic stimulant at fixed periods to avert troublesome consequences. He is convinced, from a case recently reported to him, that operators of experience, and with full knowledge of the use of morphine by a patient, do not always realize the great detriment resulting from the sudden withdrawal of this article after an important operation. All abnormal conditions resulting from any habit should be compensated in the after-treatment. Observation of the changes resulting from inflammatory processes should be accompanied by a study

of those modifications impressed upon the tissues by impairment or undue activity of the nerve element, which enters into their composition. That many operators fail to take into account the nervous system, in their surgical pathology, shows a lack of due consideration of the surroundings of the patient.

The distinction of external and internal treatment is held by most European authorities as the basis of recognition for the practice of surgery and medicine. But this line of distinction does not imply that all disorders of the inner structures are to be left for the treatment of the practitioners of medicine; nor should all the pathological conditions not demanding operations be excluded from the domain of surgery. A proper recognition of the scope of surgery and medicine is that of organic and functional disorders of the system. With this limitation, the work of the physician should be confined to such measures as are calculated to correct the performance of the functions of the different organs of the body, whether internal or external. When organic changes ensue, whether demanding the use of medication or a resort to operative measures, the case comes within the field of surgery. It presents a modification of structures, which alters the constituents so as to produce a departure from the normal state of the part involved, in its size, shape, or density. With this distinction between functional and organic disorders for the practice of medicine and surgery, so soon as a change in the state of the case is recognized by the physician, it should be transferred to the charge of the surgeon, and he will still have the disadvantage of combating the latter stages of organic disorders.

Conservative surgery may be destructive of certain parts for the purpose of saving the structures. He who fails to use the knife or the cautery, when a resort to either would stay the progress of disease, is not the exponent of conservative surgery, but, on the contrary, aids and abets the work of destruction in the parts implicated, while he contributes ultimately to the death of the patient.

Ignorance and inexperience often lead to sad results in meddlesome surgery, when limbs are sacrificed or organs mutilated, to gratify the desire to figure as a bold operator. In such cases, no high-toned member of the profession should shield the culprit from the charge of malpractice or from the assessment of damages by a court of justice. Over-caution against doing harm is far preferable to meddlesome surgery, and yet we would not hold him guiltless who stands

with folded arms and suffers a patient to die who might be saved by a timely operation. Still, there is a field in surgery for masterly inactivity, and non-interference is to be highly commended when, by an operation, a fatal result is precipitated. A surgeon should be called in proper time by physicians having cases under their care which are likely to require surgical interference. If the surgeon found no indications for an operation, then of course the physician would be relieved of responsibility in proceeding with the treatment. But most probably their joint attendance would lead to the most satisfactory result in enabling them to determine upon the conditions developed in the progress of the case which might warrant an operation.

The dilatory spirit manifested by patients, and those around them, as to resisting surgical means of relief in acute cases, has proved a barrier to the adoption of the expressed views of surgeons in favor of prompt action. All practitioners of experience have had occasion to regret that the opportunity for forestalling a grave malady has been lost by the indisposition to submit to a timely operation. When death is inevitable without operation, and the knife affords the only chance, however slim, for escape, it is a fair mode of dealing with this class of cases for the surgeon to put himself in the place of the patient and determine what he would desire for himself under similar circumstances. Most of us would avail ourselves of the operation and hope for the best. Viewing matters from this standpoint, if those interested in the patient manifest a desire to take the risk of which all are apprised, Dr. Gaston thinks we are warranted in operating even should the probabilities be greatly against a successful result. It is, nevertheless, true that untoward results, even when expected, tend to discredit surgery, and to give an excuse to others for declining an operation at a certain stage when it might serve a good purpose.

But a serious question for settlement among ourselves as surgeons is, the differences in the surgical views of those who are equally entitled to think and to act in regard to surgical cases of great gravity.

In consultations with other surgeons Dr. G. has sometimes submitted a definite view in favor of immediate operation, when the response of his colleagues has been such as to discourage interference. On some occasions the unfavorable verdict has been accompanied with the statement, that if he thought proper to take the responsibility of operation, they would render assistance, without, however, expecting

benefit. Of course he has declined to rush into the breach under such circumstances; yet there ought to be some expression from the profession as to the line of duty for one who feels prompted to undertake the rescue from a most perilous situation, in which there is absolutely no hope without a surgical operation.

As to the propriety of immediate operation in that desperate class of cases which result from the crushing and mangling of limbs, attended with profound shock, most surgeons watch and wait while stimulants are resorted to for restitution of the vital forces. With our deficient knowledge of the exact etiological factor in this anomalous condition, he is inclined to the view that a continuous baleful influence is propagated to the nerve centers from the disintegration of the structures involved, and that this may be modified favorably by a clean incision through sound tissues above the point of the injury very soon after such violence to the parts. Surgical relief within fifteen or twenty minutes after an accident, involving the muscles, bones, nerves and blood-vessels, cannot intensify the shock, and many cases left to die without operation might be rescued by a prompt amputation of the member. The A. C. E. mixture offers the most favorable conditions for an anæsthetic and tends to lessen rather than increase the prostration, while the operation should be done with all possible dispatch.

It may prove the most conservative surgery to lop off structures whose vitality is completely destroyed, and under the proposed state of the parts there can be no prospect of restoration of nerve-power or circulation to the tissues by delay in undertaking an operation. A proper appreciation of the participation in shock by the ganglionic nervous system should impress the surgeon with the great importance of arresting the morbid influence at the very earliest period practicable by removing the cause while energetic correctives are employed.

As to the precautions requisite in all grave operative procedures to avert a depressing effect, independent of previous violence, the use of moderate doses of quinine and strychnine during twenty-four hours, preceding an important surgical operation, seems to ward off the nervous prostration. It has also been his custom to administer an alcoholic stimulant with a hypodermic of morphine and atropia within a half hour preceding such an operation, and these preliminary measures have been attended with most satisfactory

results. Prevention of shock is preferable to combating it by energetic means after a surgical operation.

To prepare a patient for any capital operation, when the vital forces have been exhausted by long suffering, it is requisite to support the system by tonics and nutritious food for days or weeks prior to the surgical procedure. A neglect of this precaution is inexcusable, except in cases of urgency, when delay would be likely to aggravate the malady.

The after treatment in surgical cases should include not only medication and food, but proper seclusion from exciting associations and due regard to the hygienic surroundings.

The next paper was read by Dr. William Warren Potter, of Buffalo, N. Y., entitled

Specialism in Medicine Particularly as Related to Surgery and Gynecology.

The time has passed when we may with propriety discuss the needfulness of specialism and specialists, because they have grown to be a necessity, and it would not be possible to return to the old way. No one man can cover the whole professional field in teaching or practice, because it is already too large, and is constantly widening. If specialists then are a necessity, the next question to be considered is the method of preparation for the practice of a specialty.

It is observed that specialists sometimes enter upon practice without adequate preliminary preparation for the work; and again they have gone out of the medical schools and immediately begun practice in special lines. Either of these roads to specialisms is open to condemnation. Specialists should be properly trained by four years of school life, and then spend six or eight years more in private practice, post-graduate study, and foreign travel. Hence it would appear that fourteen years is about the average time from entry upon the study of medicine to properly develop a specialist. If specialists are thus trained, they will less frequently fail to recognize the fact that a local fault is oftentimes only an expression of a general dyscrasia, and that the general system frequently needs attention quite as much as the local manifestation of the malady.

The relation of specialists to general practitioners is an important subject for consideration. If there has sprung up an antagonism between them, the specialists themselves must put it down. It is well to recognize the fact that specialists need help from the general practitioner quite as

often as the general practitioner needs help from them; and it will be better for all concerned, and especially for patients, when physicians act on this principle.

A specialist should abandon general practice when he enters upon his chosen field of ministration. The reciprocal relations between specialists is also a matter important to consider, and care must be taken that each department confine itself strictly to its own work, and does not encroach upon the boundaries of territory properly belonging to others.

The ethics of specialism may be formulated very simply, and do not require a decalogue of dogmas for its exposition. In 1840, Samuel Jackson, in addressing a class at the University of Pennsylvania, said: "Every man of good sense, possessed of honorable sentiments, and a moral feeling of right and wrong, by the instinct of honesty, will know how to conduct himself without a code to regulate his deeds." This is about the sum and substance of all ethics, and is adequate for the government of specialists, as well as general practitioners.

The responsibilities of the specialist are now greater than at any other time in our history. The improved methods of teaching in the schools; the massive excellence of medical literature; increased clinical opportunities, and separate State medical examining and licensing boards, all contribute to improve the quality of physicians, and this must apply with as much force to the specialists as to others. The schools, however, should be restrained in their tendency to encourage specialism. Their whole energy should be addressed to the teaching and equipment of men for general practice. Specialists will evolve fast enough from the general practitioners so sent out, and this should be the only road to the practice of a specialty.

If general practitioners have become disturbed by the circumstances that tramps have sometimes taken possession of a portion of their territory, they must be consoled with the fact that there yet remains enough to cultivate, and that specialists will be only too glad to assist in driving out these intruders. The argument then is,

First. There is essential need for specialists. Divisions of labor in every field are demanded, and nowhere more than in medicine.

Second. Specialists being a necessity, they must equip themselves by years of study, and devote themselves to

still a greater number of years to general practice before they are justified in offering themselves as specialists.

Third. They must conduct themselves in such a way as to merit the respect of the general practitioner, and to invite his co-operation in their work.

Fourth. The unwritten ethics of specialism demand that there shall be reciprocal relationship maintained, not only among specialists themselves, but also between specialists and general practitioners.

Fifth. The opportunities for perfection in special lines of medical study are so great, and medical literature in both journalistic and text-book form is so rich, that weighty responsibilities are entailed upon the specialists, which must be discharged with fidelity and honor.

Sixth. The schools ought to discourage any and all students who give promise of entering upon the practice of a specialty as soon as the college doors are passed, and before the swaddling clothes of the professional tyro are slipped.

The next paper in order was by Dr. R. M. Cunningham, of Pratt Mines, Ala., on *The Relations of the General Practitioner to Gynæcology*.

Then followed the paper by Dr. W. F. Westmoreland, of Atlanta, Ga., on *Specialism in Medicine*.

The Simple, Septic, Traumatic and Specific Forms of Cervicitis and Their Treatment.

Dr. Bedford Brown, of Alexandria, Va., ex-President of the Medical Society of Virginia, etc., stated that, after the observation and treatment of female affections extending over a period of forty years, he is satisfied that the condition known as cervicitis is not the simple uncomplicated affection which the published treatises lead us to believe, but that it is a morbid state arising from a variety of causes having diverse types of pathology, often extensive and important complications, and requiring opposite methods of treatment. In practice he has met with four distinct forms of cervicitis, which he classifies according to the peculiar nature of the causes giving rise to them. He has found in practice *the simple, septic, traumatic and specific forms*—all having a different etiology, distinct pathological phenomena, and requiring modified methods of treatment.

The simple form arises purely from simple causes. It is non-infectious in origin, and is incapable of imparting infection. It comes from the action of cold and over exertion during menstruation; from excessive venery; from

unrequited or ungratified erotisms of the sexual system; from tight lacing; the pressure of heavy skirts; from malposition of the uterus forcing the cervix down on the perineum and sphincter ani.

In the *treatment of the simple form of cervicitis*, the writer formerly attached great importance to the local treatment of the attendant endo-cervicitis, until he discovered by experience that this exerted no benefit on the congestion, inflammation and hyperplasia of the cervix. Now he addresses his remedies principally to the element of vascular congestion. Primarily, serous depletion of the engorged vessels is obtained by means of tampons of cotton saturated with glycerine and borax every third day inserted in the vagina. Alternately with these serous depletions, Churchill's tincture of iodine is applied over the entire cervix thoroughly, but not in the canal. By these means congestion, or hyperæmia—that element of vascular repletion that maintains inflammation and hyperplasia—is kept in constant abeyance, and at the same time endo-cervicitis is gradually subdued, because its basis—vascular engorgement—has been removed.

In those cases of simple cervicitis maintained by pressure of the cervix on the perineum and rectum, a graduated system of elevation of the organ is accomplished by means of Smith's pessaries. Every week a new pessary is inserted, one-eighth of an inch larger in size each time, which will finally accomplish complete elevation of the organ to its normal position without pain or inconvenience. Simple cervicitis is strictly a local disease of non-infectious origin and character, and is amenable only to simple local treatment.

The septic form of cervicitis is a very different affair from the preceding, and is of far more gravity and importance. It arises alone of septic infection, and is fully capable of imparting septic infection to all communicating structures. Septic matter from decomposing placenta, membranes, coagula, or uterine discharges, contain the septic germs from which it arises. This septic matter is absorbed by the lymphatics of the cervix causing cervical lymphangitis. Hence septic cervicitis is nothing more nor less than lymphangitis of the cervix.

In this form of cervicitis the lymphatic and vascular tissues of the cervix are intensely engorged, the inflammation active, the redness of surface and œdema resemble erysipelas, and the purulent discharge is copious. The sep-

tic infectious matter does not by any means confine itself to the cervix. It traverses, according to pathological laws, the lymphatic vessels of the pelvis communicating with those of the cervix, and is for a time arrested in the lymphatic glands of the pelvis, there setting up pelvic lymphadenitis, and then infecting the system in the form of septicæmia. Pelvic lymphadenitis is a very important complication of septic cervicitis. It means not only inflammation of the pelvic lymphatic glands, but the involving in the septic process of all contiguous structures in the pelvis. It is a condition often confounded with pelvic cellulitis, peritonitis and abscess. In addressing our *treatment* to the cervix and pelvic inflammation, it should be antiseptic from the start. Hot carbolized douches in the vagina daily, followed by the insertions of a tampon containing glycerine and iodoform daily, and the application every second day of Churchill's iodine to the entire vault of the vagina and the cervix. The iodoform and iodine are rapidly absorbed into the lymphatics and blood vessels, and then with more promptness and energy than any other antiseptic agents accomplish disinfection. Internally the sulphate of quinine and sulphide of calcium are the best general disinfectants.

The traumatic form of cervicitis is one of the most interesting forms of the affection. It arises from injuries of the cervix either in labor, abortion, or mechanical dilatation from instruments. These injuries are essentially wounds of its structures in the form of complete lacerations, mere fissures in the mucous membrane of the canal along its course, or at the internal os, or contused wounds from prolonged pressure. These fissures are either perceptible at the margin of the os or entirely concealed within the canal, and may remain for years a source of irritation or inflammation in its tissues without detection. These fissures never heal by first intention, while open lacerations often do. Neither can they be cured by operation. Their diagnosis is made by passing a flexible silver probe up the canal to the internal os. When the instrument touches the fissure and all along its lines, a sharp, lancinating, nauseating pain is experienced similar to that when the nerve of a tooth is touched with a probe. These concealed fissures, however slight, remain unhealed for an indefinite period, and always gives rise to constant irritation, inflammation and hyperplasia of the tissues of the cervix, and, in addition, endo-cervicitis. Dr. Brown is convinced that a large proportion of the cases of cervicitis in child-bearing women, and in women whose

uteri have been dilated mechanically, are due to concealed fissure in the canal at some point. The favorite location is at the internal os.

In *treating this form* of the affection the fissure must be healed as well as the inflammation and congestion resolved. Dr. Brown is in the habit of swabbing out the canal with glycerine and iodoform, or aristol now. Every third day, twice a week, a mild solution of nitrate of silver is applied throughout the entire fissure along the canal. Over the external surface of the cervix Churchill's iodine is applied every fourth day. These means rarely fail to heal the wounds and resolve inflammation. He uses also nitrate of silver.

The *specific forms* arise, as the term indicates, either from gonorrhœal or syphilitic infection. A certain proportion of the cases of cervicitis in the married and unmarried that comes under our observation are due to gonorrhœa. These cases are very intractable, and may last for years without the cause being suspected. The inflammation of the cervix at first very violent, gradually subsides into the subacute, where it remains until relieved. In gonorrhœal cervicitis there is a purulent discharge, not only from the canal, but from the external surface of the cervix and vagina, which is diagnostic of the condition. Endo-cervicitis from this cause is apt to end in contraction of the canal from formation of strictures. Oxide of hydrogen washes, also permanganate of potash, are always useful. But there is nothing equal, in gonorrhœal cervicitis, to a solution of nitrate of silver painted over the entire os and vagina. Iodoform and glycerine should be applied frequently in the cervical canal.

In syphilitic cervicitis the condition is developed as a part of secondary and tertiary syphilis. The os and cervix become congested, inflamed, dark red, spongy, with slight erosions with well defined edges. The condition may be found in association with other general signs of constitutional syphilis or not. One of the best diagnostic tests of this form of cervicitis is that it is not amenable to local treatment.

We may diligently use all local agents and the congestion, inflammation and erosion are but little changed. The cases that came under his care were all treated faithfully by local means without benefit. Finally, in each case, Dr. Brown discovered that his patient had been the subject of syphilis, where an anti-syphilitic course of treat-

ment caused the inflammation, congestion, and erosions to vanish. Two of these cases he had treated for syphilis previously, he supposed with success. Now, when he had an intractable case of cervicitis with these symptoms in the married, for two of these cases were in chaste married women or in the unsuspected single woman, he considers it important to investigate the constitutional condition of his patient with reference to infectious influences. We may have under our care a case of specific cervicitis when we least suspect the true nature of the case.

In one of the cases of this kind, in which he had tried locally in a young girl for cervicitis for months without benefit, she called his attention to nightly pains in the limbs when the detection of a syphilitic node on each tibia decided the nature of her case, and a mercurial and iodine treatment cured the nodes, the nocturnal pains, and the cervicitis.

In another case a married woman contracted syphilis from her husband in the first week of marriage, for which she was treated by Dr. Brown. There were two well marked chancres on the labia. These healed, and apparently there were no constitutional symptoms following. In two years the woman had two abortions, probably from syphilis. Then she had menorrhagia, for which he was consulted. The os and cervix were found large, spongy, highly congested, dark red, inflamed, but no secretion of mucus or characteristic symptoms. The woman was treated locally for a long period without success.

The congestion, inflammation and menorrhagia continuing, he then suspected that syphilis was at the bottom of the trouble, when a thorough antisymphilitic course of treatment caused complete resolution of the cervicitis and subsidence of the menorrhagia. He believes that this woman could have been treated for ten years locally without benefit.

The paper on *Appendicitis* by Dr. Edward McGuire, of Richmond, Va., in his absence was announced only by title.

The paper of Dr. Wm. H. Meyers, of Fort Wayne, Ind., was on *The Surgical Treatment of Tubercular Peritonitis*.

The following is the summary of the paper by Dr. A. Morgan Cartledge, of Louisville, Ky.:

Present Status of Drainage in Surgery.

First. The principle of artificial drainage in surgery, while very ancient, was imperfectly understood, and was oftentimes as much a factor for evil as for good.

Second. Though our knowledge of the principles which govern a healthy regeneration of wounded structures has greatly advanced, and our progress in wound therapeutics kept pace, we fail to appreciate how artificial primary drainage can be altogether dispensed with, in surgical practice.

Third. To lessen the use of artificial drainage it is necessary to thoroughly apply the principles of asepsis and antiseptis, combined with buried sutures, fixation and alimentary or systemic drainage.

Fourth. Where from any reason the production of serum cannot be controlled, its removal by drainage is a safer surgical measure than any attempt at sterilization in situ.

Fifth. The time required for primary drainage is from twenty-four to sixty hours; to wait longer is to encourage trouble; to remove sooner than twenty-four hours is taking risks not warranted in the premises.

Sixth. Capillary is to be preferred to tubular drainage in wounds other than those of the large cavities. For this purpose absorbable material should be selected, cat-gut being the best. The size of the gut and number of strands employed should be proportioned to the size and extent of the wound to be drained. Drainage by rubber tubes should be relegated to secondary or pus drainage.

Seventh. Where it is desirable to combine hemostasis and drainage in the same measure, the strips of iodoform gauze, as recommended by Mickulicz, fulfill a most useful purpose.

Eighth. Where natural drainage can be utilized without producing unsightly cicatrices, artificial drainage should be dispensed with; when feasible combine the two.

Ninth. Wounds involving the brain and cord had best be drained to avoid mechanical violence to the function of delicate structures by retained serum.

Tenth. Necessity for artificial drainage will most often arise in wounds invading the large cavities; here inflexible tubular drains (glass) best meet the requirements, aided or not by materials acting by capillarity.

Eleventh. The method of secondary suture, after primary wound secretion is over, advised by Cocher, seems to possess no advantage over drains that have to be removed, and certainly is not to be compared in convenience, comfort, etc., to the patient, to absorbable capillary drains.

THIRD DAY—*Morning*.—The first paper on the programme was that by Dr. G. Frank Lydston, of Chicago,

Ill., on *Modern Bacteriological Research in Relation to the Surgery of the Genito-Urinary Organs*.

Dr. William C. Dabney, of the University of Virginia, being unable to attend the session, presented his paper by title only, on *The Nature of Shock and Allied Conditions*.

Dr. James Evans, of Florence, S. C., also presented a paper on *Shock*.

Ovariectomy in Old Women was the title of a paper read by Dr. Joseph Taber Johnson, of Washington, which appears among the "Contributions" to this December number of the *Virginia Medical Monthly*.

Dr. George Ross, of Richmond, Va., read a paper reporting a *Manipulative Mistake and its Consequence*. [See Article VII of this issue.]

Operation for Hare-lip without the Use of the Pin.

Dr. William Perrin Nicolson, of Atlanta, Ga., said that the only excuse that he would offer for presenting this subject to the Association was the fact that almost all of the text-books, both recent and old, insisted upon the use of the pin, which he believed to be not only unnecessary, but tending to mar the result of the operation. It was practically impossible to prevent the formation of pin-marks if the pin remained until healing was well advanced, and if it was removed before, its object was defeated. It was in his opinion one of the remains of the surgery of the day when suppuration was expected and invited, and when granulation was the prevailing method of healing. For the past two or three years he had been dressing the operation wound just as he would one that was incised, and the result had been eminently satisfactory in every respect. Nothing was necessary but the simple catgut suture, as he had demonstrated by actual experience. He had used silk and catgut, both plain and chromacised, and had found that nothing was so satisfactory as the simple catgut. It was very desirable in children that the suture should be one which would not have to be removed, as it was possible in this way to complete the operation at the first dressing. The method followed was to see that all tension was removed as far as possible, and close the wound with sutures applied in the usual way, with possibly some coaptation sutures of fine silk at the lip border. After dusting on iodoform, the wound was supported with adhesive strips, though in an older subject the iodoform scab was satisfactory. In cases of very wide fissures, in which it was im-

possible to prevent traction on the wound edges, a silk-worm gut, carried through the lip and looped over pledgets of iodoform gauze on each side, could be used. In one case, in which there was a giving way of the line of union, such a suture was left in place for two weeks without any trouble, and thus permitted granulation to give a fair result. In this case there had been two failures with the pin operation, and he did not think that any other method than the one he used (granulations without the pin) would have had any success at all. He closed by saying that he believed that it would not be long before scientific surgery would no longer know the hare-lip pin, except as a memory.

The Part that Rectal Diseases Play in Women, was the subject of the paper by Dr. J. W. Mathews, of Louisville, Ky.

The programme for the *Afternoon Session* called for a paper by Dr. Edwin Ricketts, of Cincinnati, O., entitled *Cholecystomy, with the Report of a case*.

Dr. W. E. B. Davis, of Birmingham, Ala., presented a paper on *The Treatment of Stones in the Biliary Duct*.

The title of the paper by Dr. Richard Douglass, of Nashville, Tenn., was *Puerperal Peritonitis*.

Dr. L. S. McMurtry, of Louisville, Ky., reported a *Case of Large Uterine Myoma; Abdominal Hysterectomy—Recovery—Exhibition of the Myoma*.

Dr. James A. Goggans, of Alexander city, Ala., presented a paper on *Cysts of the Mesentery*.

Dr. I. S. Stone, of Washington, D. C., reported a *Case of Obscure Abdominal Hemorrhage*.

Place selected for the Sixth Annual Session during November, 1893, New Orleans, La. Officers elected for the ensuing term: President, Dr. Bedford Brown, Alexandria, Va.; Secretary, Dr. W. E. B. Davis, Birmingham, Ala.

TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA AND TENNESSEE.

The Fourth Annual Meeting was held in Chattanooga, October 25th, 26th and 27th. The President, Dr. W. E. B. Davis, of Birmingham, Ala., presided during the session. Dr. R. J. Trippe, President Chattanooga Medical Society, welcomed the visiting members. A paper was read by Dr. Frank Trester Smith, of Chattanooga, entitled:

Tests for Vision,

in which he presented a test for use by the general practi-

tioner, for which he claimed the advantage of greater simplicity than the ordinary test types from the fact that the characters were of only one size and the test depended on the distance at which it could be read.

Dr. George Price called attention to the fact that patients are frequently subjected to considerable expense to journey a long distance to consult an oculist when the general practitioner should be able to make the diagnosis. Many patients have normal vision but cannot read for any length of time. These cases should have an expert examination. A simple test for insufficiency of the muscles is with a dot of one-eighth of an inch in diameter, which will appear double when brought close to the eyes in insufficiency. The method of using this test was demonstrated.

Dr. E. L. Jones gave as a simple test for errors of refraction the use of a small perforation made with a pin in a card. If one sees better through the pin-hole, glasses will improve the vision.

Dr. Luther B. Grundy of Atlanta, read a paper entitled, "*The Present Demand for Better Medical Education in the South*" (which appeared in November number of this journal.)

Dr. James E. Reeves, of Chattanooga, said that this sermon had been preached forty years ago, but that the condition was worse now than ever, owing to the fact that the college doors were thrown so wide open.

Dr. C. W. Barrier, of Columbus, Ga., presented a number of patients illustrating:

Talipes Equino-Varus.

One of the patients had worn braces 16 years, and could not walk without them; another had used an elastic dressing only four weeks, and could stand flat-footed and walk some. A number of cases were reported that had been operated on and had worn braces (steel) from 5 to 15 years, still being unable to go without them until treated by the elastic method, by which all were cured in from four to twenty months. His theory was that braces prevent muscular exercise, contraction and development, and contribute to atrophy. He described the elastic dressings, and gave an outline of the mechanical laws which govern their use.

Dr. W. L. Gahagan, of Chattanooga, presented *A Case of Keloid* in an adult negro.

Dr. G. A. Baxter, of Chattanooga, said that these cases were generally incurable, and that they often occurred on the site of burns.

Dr. James E. Reeves suggested the use of ergotine hypodermically, and reported a case so treated occurring in the practice of Dr. G. W. Drake. He had used this drug in the treatment of nævi.

Dr. E. Dickerson suggested that these tumors might be removed by the use of electrolysis.

Dr. G. A. Baxter said that there was no trouble about the removal of the growth, but that it was sure to return, each succeeding growth larger than the others. He would not remove it unless it interfered with usefulness of some organ.

Dr. M. B. Hutchins thought that by passing a strong enough current through the base of the tumor it might thus be destroyed.

During the afternoon session, Dr. M. B. Hutchins read a paper on

Epithelioma—Some Experience,

relating a number of cases. He concluded that it was better to leave an epithelioma alone unless it could be radically removed.

Dr. A. B. Burke favored the attempt at removal, which if not successful, at least retarded the growth.

Dr. E. H. Kuykendall used caustic paste in treating epithelioma, and preferred sulphuric acid paste. This is preceded with curetting and leaves but little scar.

Dr. James E. Reeves called attention to the fact that the diagnosis by the microscope was easily made, and that cases often diagnosed as epithelioma are lupus. He thought that half of the author's cases were lupus. He has more confidence in the use of lactic acid than any other medicine.

Dr. J. M. F. Myers related a case of an *ulcer on the finger* of a boy which had resisted treatment and asked if it might be a cancer.

In closing the discussion, Dr. Hutchins said that he preferred the Marsden's paste, as there was less pain and less destruction. He had lived with epithelioma for three years in the New York Skin and Cancer Hospital, and did not expect to find that half his cases were not epithelioma. He did not think the microscope necessary to diagnose these cases, as they were well marked.

Harry Wise, Ph. G., read a paper on

The Relative Value of Proprietary and Pharmaceutical Preparations.

Proprietary preparations are such as are supposed to be for

the exclusive use of the profession ; some are meritorious, all are pharmaceutical preparations of more or less value, and have been known and used or discarded by physicians before their so-called inventors led them to the baptismal font and thrust them rechristened before the medical profession. The greatest enemy of the proprietary medicine is the pharmacist, usually styled the "unscrupulous druggist." For fear that the medical fraternity may not be misled, they are notified that the druggist has not the laboratory facilities, even if he had the knowledge and experience to make these concoctions. If the medical fraternity lacks confidence in themselves and the pharmacists, and feel that they must resort to proprietary medicines, they should at least be just enough to see whether the article has any virtue aside from the printed pleas and absurd claims for superior laboratory facilities and knowledge and experience. Proprietaryship is right when used to protect something of merit and virtue. Pharmaceutical preparations are the legitimate outcome of medical investigation and research, and should have priority over its illegitimate offspring, proprietary medicines.

Dr. G. W. Drake said that there was a great difference between proprietary and patent medicines ; it was right to use the one but not the other.

Dr. James E. Reeves said that some of the proprietary medicines were dangerous.

Mr. A. D. Roach did not think that the paper reflected on any reputable house.

Mr. Wise, in closing, said that it was preposterous for any one outside to dictate what the doctors should use. The legitimate druggist was the proper source from which the doctor should draw his supplies.

Special vs. General Practice in Medicine

was the title of the paper by Dr. W. J. Killen, of Birmingham, Ala., formerly House Surgeon in the Manhattan Eye and Ear Hospital, New York, and member of Jefferson county and the Alabama State Medical Association. The special idea of the paper is to impress upon the general practitioners the important fact that specialists are not rivals but their best assistants ; and that the general practitioners should inquire into the merits and educational advantages of a specialist aspirant, and accordingly encourage or discourage him. They should frown down the travelling and advertising quacks, who by their dishonest humbugging

methods make the people suspicious, and bring discredit on the honest profession. "Whatever we do should be done well," should be the motto. The general practitioner is indispensable; but life is too short for any man to become proficient in all branches of medicine; so the specialist should be favored for his greater knowledge of the one subject. The young medical man, who aspires to be a successful specialist, should first practice general medicine a number of years, so as to become clinically conversant with the connections between general medicine and the special branch. Then by a course as interne of a hospital, devoted exclusively to that department he may choose as a specialty, he may be characterized as *competent*. As with carpenters who build a house, each one knowing his own work best, though he has a good general knowledge of the whole structure, so should we, by special research and practice, reach as near the ideal in some branch as possible.

Dr. G. W. Drake said that it depended on the man whether he should be endorsed or not. There should be greater preparation for a specialty than for general medicine.

Dr. John P. Stewart thought that a general practitioner should know when an eye or an ear was diseased. Experience in general practice was a prerequisite for the study of a specialty.

Dr. J. C. LeGrand, of Anniston, Ala., thought the author too severe on young men who were ambitious to enter special practice.

Dr. Frank Trester Smith said that the knowledge in general medicine could be most advantageously obtained in hospitals.

Dr. R. J. Trippe thought that all specialists referred all troubles to their special line, and that it was not right to send any except those who were not relieved after the general practitioner had exhausted his resources.

In closing, Dr. Killen deplored the fact that there was a tendency for young men to enter a specialty before learning anything of general medicine.

During the Night Session, Dr. G. A. Baxter presented "*A New Operation for the Radical Cure of Inguinal Hernia.*"

Dr. W. D. Hoyt, of Rome, Ga., read a paper entitled
A Clinical Study of the Relations Between Scarlet Fever and Diphtheria.

He advanced the idea that scarlet fever is exotic at the South. He reported cases of scarlet fever following diphtheria

and co-existing with other cases in the same family. Both diseases are controlled by the same specific treatment. Loeffler's bacillus is found in both, and the diseases cannot always be distinguished from each other according to the best authority. They are liable to the same complications. May we not consider them as varieties of the same disease?

Dr. James E. Reeves claimed that scarlet fever was a distinct disease of a weak contagion. Neither scarlet fever nor diphtheria can originate spontaneously.

Dr. Joseph Holt, of New Orleans, has never observed any combination of the two diseases. The scarlatinal sore throat prepares the way for an attack of diphtheria, but the diseases are distinct.

Dr. H. Berlin considered the two diseases distinct, and in no way related.

Dr. G. W. Baxter has seen isolated cases of both scarlet fever and diphtheria in Chattanooga.

Dr. E. Dickson, of Coal Creek, Tenn., related *Three Cases of Wounds of Large Arteries*, in which he had used compression instead of trying to ligate.

Dr. G. A. Baxter related a case of wound of the popliteal which was treated by pressure.

Dr. A. W. Boyd stated that in a case of fracture of the skull, where the longitudinal sinus was injured, the bleeding was controlled by pressure.

Dr. R. M. Cunningham, of Pratt Mines, Ala., related a case of death from compression of the brain.

Dr. E. E. Kerr related cases of wound of the popliteal artery treated by pressure in the wounds after packing them with iodoform gauze; also in a man who had his throat cut with probably a wound of the carotid.

Dr. R. J. Trippe would in no case pack a wound of a large artery, but would ligate.

Dr. John P. Stewart said that ligation was the proper course, but thought it might sometimes endanger the nutrition of the limb.

Dr. H. Berlin said that pressure and ligation were practically the same. There was little danger from ligation of an artery such as the femoral.

Dr. W. D. Hoyt said that during the war Dr. Henry F. Campbell had successfully treated a case of extensive inflammation of the leg with beginning gangrene by ligating the artery.

During the second day, Dr. J. W. Hallum, of Carrollton, Ga., reported

A Case of Separation of the Abdominal Muscles in Normal Labor.

In a primipara, aged 16, after being eight hours in labor, a tumor suddenly appeared. It was large and fluctuating, and situated in the median line. The recti muscles were separated from near the ensiform cartilage to within one and a half inches of the symphysis pubis. On drawing off two quarts of urine, the tumor entirely disappeared, and delivery was soon accomplished. The separation still exists more noticeable when the patient is lying down, as, when in a standing position, the muscles are rigid, and close the opening through which a large mass of intestines escape when lying down. The Doctor asked as to the dangers of another pregnancy, and for treatment at present, and in the event of another pregnancy.

Dr. E. T. Camp thought an abdominal bandage indicated.

Dr. G. W. Drake was at a loss to account for the accident, and thought that it must have occurred prior to labor.

Dr. L. P. Barbour thought that the abdominal muscles played an important part in labor, and could readily conceive how the accident occurred.

Dr. J. P. Stewart thought that the only remedy was to prevent conception.

Dr. J. C. LeGrand would be willing to risk another pregnancy.

Dr. R. M. Cunningham thought the cause was the distension of the bladder.

Dr. R. J. Trippe thought a laparotomy indicated, and that if the rent was sewn up there would be complete relief.

Dr. W. E. B. Davis said that there were cases reported where the uterus came through the walls. As to an operation, he should be governed by the rules which obtained in other hernia. If the patient was comfortable, do not operate, but in this case, as the muscles were separated for nine inches, an operation might correct the defect.

Dr. Andrew Boyd, of Scottsboro, Ala., reported *A Case of Imperforate Hymen*, in which the symptoms were at first obscure, but finally the abdominal enlargement and delayed menstruation called for an examination. After operation, there was complete recovery.

Dr. R. J. Trippe related two similar cases

Drs. J. B. Cowan and R. M. Cunningham also cited cases.

Dr. L. P. Barbour related a case where he had operated

at the age of six months, and had thus saved all the unjust suspicions and other troubles related in the other cases. The condition was discovered by the mother.

Dr. R. M. Harbin read a paper on

Puerperal Eclampsia, with Report of Cases Treated with Nitro-Glycerine.

After reviewing the history, and the pathology of the disease, its clinical history and prognosis, two cases were reported treated with nitro-glycerine—gr. $\frac{1}{100}$ every hour. In both cases the fits were controlled before delivery. In one case, two doses were given; in the other three, bromide and chloral were also used. In both cases spasms came on before labor began. Nitro-glycerine is a harmless drug. It relaxes vaso-motor spasm. There is an increased reflex excitability in the pregnant state when arterial contractions are set up; this excitability is exaggerated, causing vaso-motor spasm of the arterioles of the kidneys, thus producing acute suppression of urine and the consequent symptoms of uremia. By relaxing the spasm, the nitro-glycerin relieves the symptoms.

Dr. E. T. Camp had never used nitro-glycerine, and did not believe in it. First eliminate the poison (urea), and then use free purgation, diuretics, and diaphoretics. Control the central nervous system with bromides, chloroform, etc. Urea may be eliminated by venesection.

Dr. J. B. Cowan, as a prophylactic, gives chloroform—gtt. x, *ter in die*.

Dr. W. D. Hoyt believes there is engorgement of the portal circulation. He reported cases.

Dr. J. W. Hallum advocated large doses of morphine.

Dr. George Price said that in functional albuminuria the retina gives no sign. If, in a suspected case, you discover a discoloration of the retina, you may give a favorable prognosis.

Dr. A. T. Park believes in elimination of the uræmic poison mainly by blood-letting.

During the afternoon session, Dr. W. E. B. Davis discussed in a paper

The After Treatment of Abdominal Operations.

He said that no line of treatment could be given for all cases. Those of ordinary gravity require but little treatment. Opium, as a rule, should not be given unless the patient has acquired the morphine habit. Nothing is allowed on the stomach for twenty-four or thirty-six hours,

and not then if there is any tendency to vomiting. Liquids only are permitted the first week. For shock enemata of whiskey and hypodermics of strychnia, digitalin, etc., are given, and heat applied. Hæmorrhage can only be distinguished from shock by the presence of a tube, which should be emptied, at first, every ten or fifteen minutes. The tube should be removed in twenty-four to thirty-six hours. The bowels need not move until the third or fourth day, if no nausea nor tympanites occur. If nausea persists after twenty-four hours, small doses of calomel, frequently repeated, enemata of salts and glycerine, or large turpentine enemata, will generally get the bowels to act. Stitches should be removed at the end of a week, after which, adhesive plaster should be used. Patient should usually be in bed three weeks, and wear an abdominal supporter for a year.

Dr. R. J. Trippe endorsed the paper in toto.

Dr. E. Dickson realized the importance of detail and cleanliness. Skilled assistants are hard to obtain in private practice.

Dr. J. B. S. Holmes, of Rome, Ga., thought that too large a drainage tube was used generally. The tube was left in too long. Generally twenty-four hours was long enough. The tubes should be used where there were adhesions. He had no trouble with hernia or abscess.

Dr. Joseph Holt, of New Orleans, read a paper entitled

Pestilential Foreign Invasion as a Question of States' Rights and the Constitution; The Failure of the Maritime States Demands a Common Defense.

In it he took the ground that as the maritime States had failed to maintain a consistent line of quarantine defense, as they had repeatedly permitted the incursions of pestilence, it was logically evident that protection can only be obtained through a common defense by organizing a system of sanitary barriers, international and interstate, locating the controlling authority in a national bureau, or board, on a permanent and solid foundation, purely scientific, and wholly removed from political influence or sectional prejudice. The said bureau should supervise sanitary foreign relations, co-operating with, but not assuming, police powers, of a State vested in local health boards.

On motion the Society extended a vote of thanks to Dr. Holt for his valuable paper.

Dr. James E. Reeves endorsed the position taken by the

author, and complimented the Society on being able to attract such men as Dr. Holt to read papers.

Dr. P. D. Sims remarked that this was an opportune time for the paper, owing to the threatened epidemic of cholera next summer. United States Senator Harris, of Tennessee, had presented a bill along the line suggested, and would renew his efforts to have such a law enacted.

Dr. G. W. Drake heartily endorsed the paper. He compared the system of warfare against foreign bacterial foes to that of our country against foreign military foes. Our coast defenses should be under the espionage of the general government, because concert of action all along the line of outposts is essential to the safety of the interior. If a national system of quarantine is established, the physicians in charge of the stations should be selected with as much, or even more, care than are the officers of the army and navy.

During the night session, Dr. R. M. Cunningham, of Pratt Mines, Ala., in a paper discussed the subject of

The Surgical Treatment of Endometritis.

After studying the etiology and pathology of these conditions, the author pointed out the following indications: (1st). To remove from the cavity all foreign structures, whether introduced from without—*e. g.*, gonococcus, or developed within—*e. g.*, retained decidua, placental tissue, fungosities, etc. (2d). To remove all diseased tissue that is incapable of repair—*e. g.*, the thickened inflamed mucosa, etc. (3d). To restore the uterus and its cavity to its normal size by causing contraction and the absorption of hyperplastic elements. (4th). To provide for proper drainage during the process of repair. (5th). To promptly deplete the pelvic blood vessels.

These indications are effectually met by Polk's operation, which the doctor described in the words of Dr. Polk. He thinks it a thorough surgical procedure; that it removes from the uterus all diseased tissue and rapidly depletes the pelvic organs generally; it stimulates the uterus to contraction, causing absorption of the hyperplastic elements; it drains the uterine cavity and the operation is not dangerous. The doctor reported ten cases, all of whom were relieved symptomatically.

Dr. H. Berlin said that there was no panacea for endometritis. He had failed by this method. The treatment must vary with the cause. For six weeks after parturition the

tissue was soft, and there was danger of pushing the curette through the uterus.

Dr. R. J. Trippe cures his patients, and then paints with iodine.

Dr. W. G. Bogart had not had any good results from curetting.

Dr. W. E. B. Davis said that we should use discrimination; some should be operated on; others not.

Dr. John Purdon, of Cullman, Ala., remarked that the uterus should be entered with fear and trembling. In one of his cases death resulted from a mild operation.

Dr. J. B. Cowan related the changes that had taken place in the treatment of these troubles, and thought that if we progressed as we should, most of them would be prevented.

Dr. G. A. Baxter emphasized the importance of drainage, and the necessity of getting rid of all the diseased tissue.

Dr. W. T. Hope objected to the minutiae and red tape, described in the paper.

Dr. E. T. Camp does not believe in packing, but after curetting, washes out the cavity with a saline solution.

Dr. Cunningham did not claim that the operation was a panacea. It accomplishes as much as any procedure that does not remove organs. There was an increase of tissue in every variety of the disease, which should be removed.

The *annual dinner* followed the night session at Aull & Clark's.

During the third day, Dr. J. P. Stewart, of Attala, Ala., read a paper entitled,

Drunkenness and its Gold Cure.

In substance, he said that drunkenness produces more disease than any other known cause; likewise more insanity, more sin-crime and death. Keeley, with the cunning of a trickster, saw a golden opportunity, and took it. He keeps his remedy a secret, because he knows it is a humbug, and to further his own ends, to entice deluded fools to take his remedies. Of course it is no good. Those who claim to be cured are either deluded or paid to say so. The true remedy is prevention, as we use antisepsis in surgery, quarantine against cholera and yellow fever, and resort to vaccination against small-pox, and in our sanitation and hygiene. It is much more necessary to quarantine against this much greater evil by stopping its sale.

Dr. J. E. Purdon thought that the great good of these institutions, which could not be denied, was from concentration of thought and suggestion.

Dr. Willis F. Westmoreland, of Atlanta, Ga., had seen cases where the only good was from the fact that the patients had less cash to buy drinks. The surroundings and associations are the only advantages of the Keeley Cure. They should be kept in proper surroundings for a year or two. Time is important for the development of muscles and the nervous system. In a small number of cases, drunkenness is hereditary, and these cases usually die inebriates.

Dr. G. T. Prince thought that environment was of the utmost importance. Religion was the great remedy and safeguard.

Dr. J. B. Cowan related a case in which, after taking the Keeley Cure, the man seemed to be in a state of exultation. After a few weeks he got on a spree, and died in forty-eight hours. He had heard of two similar cases. In the insane asylums there are many cases in which the insanity is attributed to the use of the Keeley remedies. Psychological influence have much to do with the cure.

Dr. E. E. Kerr thought the Keeley system would be of use to the profession, and it should be studied. Keeley had made a success of making money.

During the afternoon session, Dr. Richard Douglass, of Nashville, presented a paper on

Extra-Uterine Pregnancy,

and related a case presenting some unusual features. There had been rupture into the peritoneal cavity some weeks before operation. There was a sheet of clotted blood over the intestines. The symptoms were frequent colicky pains, attended with symptoms of collapse. The time for operation in these cases is not when the patients are in a state of shock, but after re-action sets in. It is very rare for these cases to die from the first hæmorrhage.

Dr. J. R. Rathmell related a case, and advocated operation, if the diagnosis was at all probable, as soon as possible after re-action sets in.

Dr. R. J. Trippe said that diagnosis was all-important, and all the signs should be considered and the operation not deferred.

Dr. E. T. Camp related a case which was operated on almost in collapse for diagnosis. Death occurred in twelve hours.

Dr. R. M. Cunningham thought the condition very rare.

Dr. G. A. Baxter dwelt on the importance of an early di-

agnosis, but this was not easy, as no one symptom could be relied upon.

Dr. W. E. B. Davis said that the general practitioner should diagnose these cases in time to save the patients. He endorsed the position of the author not to operate in time of shock.

Dr. Douglass said that the question was one of diagnosis. If the decidua of pregnancy was found in the uterus, it was decisive. The microscope should be used. The main symptom was collapse.

During the Night Session, the Committee on Necrology reported resolutions, which were adopted, on the death of Drs. J. C. Shepard, Winchester, Tenn., Vice-President of the Society; H. Crumley, Professor of Anatomy, Chattanooga Medical College; Chas. Meigs Wilson, Professor of Obstetrics, Tennessee Medical College, Knoxville; Gus. McNabb, Graham, Texas.

Dr. John E. Purdon, of Cullman, Ala., read a paper on
Advanced Theories of Psychical Science.

He opened with the statement that protoplasm was the scientific basis of any consistent system of psychics. He argued that protoplasm, the physical basis of life and mind, was two-sided, inasmuch as, while it was to all intents and purposes a chemical compound, it also possessed the primitive element of subjectivity or feeling, as exhibited in its reaction to external stimulation. In his opinion life, in its widest sense of primeval activity, was always in existence, but that the undifferentiated potentialities of the beginning required a developed organism to result in thought, and that the process of development which we term evolution did *not* negative the idea of design; because the completion of the process reconciles the apparent contradiction involved by showing the beginning and the end, the potential and the actual, as two correlative aspects of the same transcendent reality when projected on the plane of the human understanding, in accordance with the working of its formal laws.

Dr. J. B. Cowan thought the profession lacking in the study of the philosophy of life along the line of psychical science. All the phenomena of life are the result of the correlation of forces acting on matter. Thought was the result of the correlative of forces properly arranged. A force once put in motion is eternal.

Dr. G. W. Drake remarked that the mind could think independent of the body, or it can use the brain as an organ.

Dr. R. M. Cunningham thought the paper not a proper one for this Society, as it dealt with a subject not familiar to most of the members.

Dr. Purdon, concluding the discussion, remarked that it was the duty of the physician to understand the most advanced theories of life, since the preservation of life was his sole aim and object, adding that the longer life in its social and cosmical sense had also to be considered in the generalizations of the educated physician.

A paper by Dr. R. H. Hayes, of Union Springs, Ala., was presented, describing *A Case of Injury to Some of the Cervical Vertebrae Combined with Transverse Fracture of the Occipital Bone*, producing complete spinal paralysis from the tips of shoulders downward; patient survived six and a half days.

A paper by Dr. H. W. Blanc, of Sewanee, Tenn., was also presented, reporting

Case of Skin Shedding.

A young woman had been suddenly attacked with nausea and vomiting. This was soon followed by a rash resembling that of scarlatina, accompanied with a slight elevation of temperature. In about three days the rash disappeared, when the whole epidermic surface began to exfoliate in large flakes, that of the hands and feet coming off almost intact, presenting the appearance of natural gloves and moccasins. The finger and toe-nails fell off about two weeks subsequently. The remarkable part of the case is that the disease is a relapsing one, this being the third attack. Several cases of this affection have been previously reported by Dr. Blanc, who suggested that it be called "erythema exfoliatum recurrens," describing the three main characteristics.

The following officers were elected for 1893:

President—Dr. Richard Douglass, Nashville, Tenn.

Vice-Presidents—Drs. Robert M. Harbin, Calhoun, Ga.; R. M. Cunningham, Birmingham, Ala.; L. Y. Abernathy, Hill City, Tenn.

Secretary—Dr. Frank Trester Smith, Chattanooga, Tenn.

Treasurer—Dr. W. C. Townes.

Recorder—Dr. W. L. Gahagan, Chattanooga, Tenn.

The Society adjourned to meet in Chattanooga the third Tuesday in October, 1893.

ASSOCIATION OF SOUTHERN MEDICAL COLLEGES.

In July of this year, the Faculty of the Medical Department of the University of Nashville and Vanderbilt University, appointed Drs. W. T. Briggs and G. C. Savage, a committee to communicate with the Faculties of all Southern Medical Colleges, regarding the matter of higher medical education. This committee invited a convention of a representative from each Southern Medical College, to meet in Louisville, Ky., during the week of the Session in that city, of the Southern Surgical and Gynecological Association. It seems that in general the replies to the circular call for such a convention were very favorable, unless the exception of Dr. Dudley S. Reynolds, acting for the Hospital College of Medicine, of Louisville, be noted. His objection seems based on the ground that his College is already a member of the Association of the American Medical Colleges, which requires that all colleges in affiliation with it shall require a three years' course of medical tuition before granting diplomas; and he expresses the hope that instead of the Southern Medical Colleges forming an independent Association they will each join the Association of American Medical Colleges—thus rendering a sectional association unnecessary.

During the morning of November 16th, fifteen Southern Medical Colleges were represented at the meeting in Louisville, for the organization of the Southern Medical College Association, to discuss the question of a higher medical standard and the extension of the college course to three, instead of two years, as it is so generally is at this time. Dr. J. M. Bodine, Dean of the Medical Department of the University of Louisville, presided.

The plan of forming a college association was heartily indorsed as presented by Drs. W. T. Briggs and G. C. Savage, the committee appointed at the conference held in Nashville last July.

After considerable discussion, a committee was appointed, composed of Dr. W. T. Briggs, Dr. Marvin and Dr. J. S. Cain, to which was referred the following points:

First. Shall we effect an organization of Southern Medical Colleges?

Second. Shall we extend the time of attendance on lectures to three courses?

Third. What shall be the preliminary requirements of students, and how shall they be ascertained?

The Convention adjourned until 4 o'clock in the afternoon, at which time the Committee reported favorably on the three questions submitted, and the report was unanimously adopted. The report embodies the extension of the lecture term from two sessions to three sessions of six months each, to be attended on three different years, and provides that no student may matriculate who has not a diploma from a literary school, a certificate from a high school, or a second-class teacher's certificate from his county superintendent of education.

Permanent officers were elected as follows: Dr. J. M. Bodine, of Louisville, *President*; Dr. W. D. Haggard, of Nashville, Tenn., *Vice-President*; Dr. G. C. Savage, of Nashville, *Secretary and Treasurer*.

Unless otherwise ordered by the President, the annual meetings of the Association will be held at the same times and places as the Southern Surgical and Gynecological Association.

The new regulations with regard to the college courses, etc., will go into effect with the sessions for 1893-4.

The following are the *Rules and Regulations* for the organization and maintenance of the Southern Medical College Association:

This Association shall be composed of delegates from Southern Medical Colleges, whose Faculties have signified a desire to become members thereof, signed these rules of organization, and paid the membership fee of \$5.

The objects of the Association are to cultivate closer and more intimate relation between medical colleges, and to elevate the standard of medical education by requiring a more thorough preliminary training and an increased length of medical study.

The Association shall be composed of one or more delegates from each Medical College, belonging thereto, who shall be elected annually by their respective faculties. Each college shall be entitled to one vote in the transactions of the Association.

The officers shall consist of a President, Vice-President, Secretary and Treasurer, who shall be elected annually, just before the adjournment of the annual meetings, and shall perform the respective duties pertaining to these offices in similar organizations.

The meetings of the Association shall be held at the same time and place of the meetings of the Southern Surgical and Gynecological Association, unless otherwise determined by the Association.

Requirements for Matriculation.—Every student applying for matriculation must possess the following qualifications:

He must hold a certificate as the pupil of some known reputable physician, showing his moral character and general fitness to enter upon the study of medicine.

He must possess a diploma of graduation from some literary or scientific institution of learning, or certificate from some legally constituted high school, general superintendent of State education, or superintendent of some country board of public education, attesting the fact that he is possessed of at least the educational attainments required of second-grade teachers of public schools. Provided, however, that if a student so applying is unable to furnish the above and foregoing evidence of literary qualifications, he may be permitted to matriculate and receive medical instructions as other students, and qualify himself in the required literary departments, and stand his required examination, as above specified, prior to offering himself for a second course of lectures.

The foregoing diploma or certificate of educational qualifications, attested by the Dean of the Medical College attended, together with a set of tickets showing that the holder has attended one full course of medical lectures, shall be essential to attendance upon a second course of lectures in any college belonging to this Association.

Branches of Medical Science to be Included in Course of Instructions.—Anatomy, physiology, chemistry, materia medica and therapeutics, theory and practice of medicine, pathology, surgery, obstetrics and gynecology, hygiene, medical jurisprudence (forensic medicine) and special laboratory work, as hereinafter provided.

Qualifications for Graduation.—Candidates for graduation, in addition to the usual requirements of medical colleges, must have attended three courses of lectures of not less than six months each in three separate years; must have dissected in two courses, and attended two courses of clinical or hospital instructions; and must have attended one course in each of the special laboratory departments, to-wit: (1.) History and bacteriology. (2.) Chemistry. (3.) Operative surgery.

These requirements shall not apply to any student who has received a course of medical lectures prior to September 1, 1893.

Committee.—W. T. Briggs, J. B. Marvin, J. S. Cain.

Analyses. Selections, etc.

Buffalo Lithia Water in the Treatment of Renal Calculi.

Dr. Albert Goodwin, of Eufaula, Ala., states, in a recent issue of the *New York Medical Journal*, that for a number of years he has prescribed Buffalo Lithia Water, with uniformly efficacious results; in gout, rheumatic gout, rheumatism, and all diseases of a uric acid diathesis, and its extraordinary therapeutic value prompts him to report the following cases of renal calculi dependent upon a uric acid diathesis relieved by its use after the failure of other approved treatment:

J. N. L., a cotton merchant, between forty-five and fifty years of age, was subject for six or seven years to frequent attacks of nephritic colic, and almost invariably passed a calculus after each paroxysm. The paroxysms finally became so frequent that the colic was almost constantly present, rendering his existence miserable. Of necessity, resort was had to opium and other anodynes, with a view to mitigating his intense suffering, until he became a confirmed victim of the morphine habit. His nervous system was shattered, and he was indeed a mere wreck. In this condition, by Dr. Goodwin's advice, he visited the Buffalo Lithia Springs, Va. For several months previous, there had been a continuous pain in the right kidney, caused, as Dr. Goodwin thought, by retained calculi or incrustations in the pelvis of the kidney.

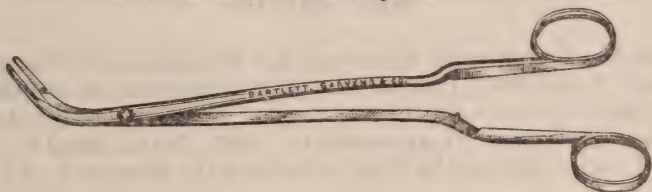
After a few weeks' use of the water of Spring No. 2, the beneficial results were very marked, the paroxysms became less frequent and of less severity, and there commenced a free discharge of calculi and sand, which continued for some three weeks, gradually diminishing and finally ceasing altogether. This was followed by rapid improvement in his general condition, and some weeks afterward he returned home in full and vigorous health, having gained while at the Springs forty pounds in weight. By the continued use of the water after returning to his home he was enabled to overcome the morphine habit entirely and lived for some years, having no return of his old disease.

This water proved not less efficacious in a similar case in Dr. Goodwin's own person. In October, 1890, he was attacked with nephritic colic of the severest type. Within a period of seven or eight weeks he had from fifteen to

twenty paroxysms, none of them lasting less than two hours, and most of them from six to fourteen. The free and continued use of Buffalo Lithia Water resulted in a cessation of the attacks and the restoration of his general health, which had been much impaired. There has been no return of the attacks up to this date—April 15, 1892. He has prescribed this water in other similar cases with decidedly beneficial results, and has no hesitation in saying that as a remedy in such cases it has no equal among the medicines or mineral waters of which he has any knowledge. It is especially adapted, he says, to cases in men who are broken down by the long and continued use of alcohol and opium in their various forms.

Pair of Post-Nasal Scissors.

Dr. John Dunn, of Richmond, Va., describes (*N. Y. Med. Jour.*, Nov. 26, 1892,) and illustrates with a cut a pair of post-nasal scissors, made for him by Bartlett, Garvens & Co.,



Richmond, Va. These scissors will be found of service in which the usual forms of adenoid forceps and curettes are unsuitable.

“1st. In the separation of adenoid adhesions to the Eustachian tube-mouth, which adhesions are often so situated as to be out of the reach of any instrument with which I am acquainted.

“2d. In the removal of adenoid masses where, owing to their duration or to constitution of the patient, the proportion of connection to lymph tissue is so great that these hypertrophies are extremely tough, and their removal with post-nasal forceps requires an undue amount of force and often brings away a strip of the mucous membrane adjoining the adenoids.

“3d. In those cases where the adenoid development has been excessive and where the greater part of these hypertrophies have been removed with the curette or forceps, these scissors will be found of advantage in trimming off the irregularities on the pharyngeal wall.

“4th. In certain cases where the usual adenoid forceps

might be used the scissors will often offer advantages, which will be seen from the nature of the case."

These post-nasal scissors have a handle similar to that of the Loewenburg's forceps, only lighter. They have the French lock. Near the finger rings is a guard to prevent over-action of the blades. The blades of the scissors are three-fourth inches long; are slightly curved with their concavity forward, and are rounded at the tips. In the above-mentioned conditions, as in all cases where operations are to be done on the upper pharynx of persons over eight or nine years of age, the application of White's Palate Retractor is necessary, if the operation is to be done to the best advantage. Price, \$3.50 net.

Book Notices.

Text-Book of Morbid Histology for Students and Practitioners. By RUBERT BOYCE, M. B., M. R. C. S., Assistant Professor of Pathology in University College, London. With 130 Colored Illustrations. New York: D. Appleton & Co. 1892. Cloth. Royal 8vo. Pp. 477—xxiv. (For sale by West, Johnston & Co., Richmond, Va.)

The Publishers have expended much in reproducing this most valuable book. The paper is heavy, type large, and the plates are accurate, made more useful by the use of colors. The Introduction (8 pages), by Prof. Victor Horsley, is a good, favorable review of the character of the work. When we remember that the first important studies in histology were done by the immortal Virchow, we can better appreciate the rapid growth of the science of histology. It may not be necessary for all good practitioners to secure this book for their libraries; but whoever studies it will become a far more scientific doctor. Chapter I gives directions for hardening, embedding, cutting, staining, etc., the specimens. The nine succeeding chapters are taken up with outlines of inflammation, repair, degeneration, and neoplasms. The concluding eleven chapters give the histological outlines of the diseases of the special systems. A valuable bibliography of 29 pages precedes the index of authors quoted, etc. Then the very thorough index of subjects leads one to think that scarcely any related subject has not been well considered in the work.

Naphey's Modern Therapeutics—Medical and Surgical, Vol. I. General Medicine and Diseases of Children. Ninth Edition. Revised and Enlarged. *Edited by* ALLEN J. SMITH, M. D., Assistant Demonstrator of Morbid Anatomy, etc., University of Pennsylvania, etc., and J. AUBREY DAVIS, M. D., Assistant Demonstrator of Obstetrics, University of Pennsylvania, etc. Philadelphia: P. Blakiston, Son & Co. 1892. Royal 8vo. Pp. 1034. Half Russia, Marbled Edges. \$6 net. (For sale by Subscription only)

This eminently serviceable work, compiled from the writings of the best authors, is out in a new and most attractive shape. Volume II, now nearly ready, will be of about the same size, and will be devoted to "General Surgery, Obstetrics, and Diseases of Women"—so that the two Volumes will cover the whole therapeutic field of the practitioner. The popularity of the work is indicated by the fact that so many editions have been called for. This ninth edition, however, far excels all of its predecessors. The useless or obsolete prescriptions in each of the former editions have been eliminated; and the latest of the approved methods of treatment of diseases, under the most recent pathological and etiological views, have been introduced. The work is systematically arranged for ready reference purposes by indices of authors, remedies, and diseases. Thus the busy medical practitioner cannot well afford to be without a copy of this work if he wishes to save time in finding the best prescriptions up to date for given diseases.

Practical Treatise on Diseases of the Skin. By JOHN V. SHOE-MAKER, A. M., M. D., Professor of Skin and Venereal Diseases in Medico-Chirurgical College and Hospital of Philadelphia, etc. *Second Edition. Revised and Enlarged, with Chromogravure Plates and other Illustrations.* New York: D. Appleton & Co. 1892. 8vo. Pp. 878. Cloth \$5. (For sale by West, Johnston & Co., Richmond)

As good as was the edition published in 1888, this second edition, bringing the subject of skin diseases up to date, is excellent—a first-rate book for the general practitioner. In its scope of subjects, revisions of pathological sections, and additions to the therapeutic advice, it is the text-book needed for general use. While the text descriptions of the various diseases are all first-rate, and the plates are true to nature, it would have been a help to the doctor who seeks to diagnose a skin disease that may occur in his practice if the photographic illustrations had been more plentiful. Beside numerous prescriptions in the text, 105 pages are devoted to

formulæ. It would have been more convenient to the reader had the formulæ added in the second edition been introduced alphabetically in the list given as being in the first edition, than to have introduced them separately, as they are.

Editorial.

Smyth County (Va.) Medical Society.

The physicians of Smyth county met on Monday last and organized "The Smyth County Medical Society." Dr. E. T. Brady was chosen President; Dr. S. W. Dickenson, Vice-President; and Dr. J. D. Buchanan, Secretary. They will hold monthly meetings at Marion, Va. Dr. Edmonson was chosen to read a paper at the next meeting. There are eighteen physicians in the county, and all will join.

Messrs. Lee & Shepards "All Around the Year 1893 Calendar,"

Prepared in colors by Mrs. J. Pauline Sunter, is a gem for the parlor, etc. It represents quaint little lads and lasses for each month, in charming attitudes, while the lines on the cards combine to form a pleasing love story. This Calendar for 1893 is printed on separate heavy card-boards $4\frac{1}{2} \times 5\frac{1}{2}$ inches for each month, with gilt edges, chain, tassels, and rings. Boxed. Price, 50 cents. Address Publishers, Messrs. Lee & Shepard, Boston, Mass., for this artistic calendar, suitable for Christmas or New Year's gift to wife, sweetheart, or friend.

Visiting Lists for 1893.

"There is no accounting for tastes" in the selection of *Visiting Lists*—provided those presented for adoption contain merit. Each of the following has its merits; so that simply a note of their contents will remind our readers of them.

The International Magazine Pocket Visiting List,—60 Patients Each Week. 1893. Arranged for the Use of Practitioners. By J. C. Wilson, M. D., Physician to the German Hospital, etc., is published by J. B. Lippincott Co., Philadelphia, Pa., \$1.50. Flap, tuck, and pocket. Size, $6\frac{1}{2} \times 4$ inches. Beside well-arranged blank pages for register, memoranda, etc., among other things, in its printed matter, we find Calendar 1893-1894, several pages of doses, numer-

ous formulæ for hypodermic and rectal administration, incompatibilities, poisons and antidotes, urinary analyses, artificial resuscitations, etc.

The Medical News Visiting List for 1893. Weekly (dated for thirty patients); Monthly (undated for 120 patients per month); Perpetual (undated for thirty patients weekly per year); and Perpetual (undated for sixty patients weekly per year). The first three styles contain 32 pages of data and 176 pages of blanks. The 60-Patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book—pocket, pencil, rubber, and catheter-scale, etc. Seal Grain Leather, \$1.25. Philadelphia: Lea Brothers & Co. 1892. It contains an alphabetical table of diseases, with the most approved remedies, and a table of doses; also sections on examination of urine, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers, and the ligation of arteries. In short, every need of the physician seems to have been anticipated in the Medical News Visiting List.

The Physicians' Visiting List, 1893, Published by Messrs. P. Blakiston & Co., Philadelphia, proves its popularity by the fact that this is the 42nd year of successful publication. The \$1 edition before us is arranged for 25 patients daily or weekly. Larger editions are issued, etc. In fact, in referring to this Visiting List, we feel that we are talking to friends already familiar with "an old reliable."

Confederate Surgical History.

It may interest the majority of our readers to learn that Mr. Geo. Foy, F. R. C. S., of Dublin, who has recently visited this country in order that he might better acquaint himself with facts relating to the medical history of the Civil War, is detailing some of the most important facts so learned, in current issues of the *Medical Press and Circular*. He is chiefly dealing with information secured from files of the *Confederate States Medical and Surgical Journal*, published in Richmond during the War; and even to those of us who were in the army he is bringing out treasures of information which either is not generally known, or has long since been lost sight of and forgotten.

Code of Ethics, etc.

The Committee of the American Medical Association to consider the question as to whether or not the Code of Ethics needs revision, has begun its labors by publishing

the Code, etc., in *The Journal* of November 19th, and has requested expressions of opinions. Journal after journal has already precipitated their opinions. We can scarcely doubt that the Committee on Revision will recognize that there is such a widespread desire for a less dictatorial form of expression in some of the sentences of the Code, etc., as to lead the Committee to recommend some changes in the verbiage, if not in the absolute spirit of some of the laws or rulings, as heretofore printed. Common sense rulings are sometimes better than rulings based on technical laws.

Southern Surgical and Gynæcological Association.

The session in Louisville, as reported in this issue, justifies the remark that the proceedings of this Association must be considered by all as eminent authority. Run the eye over the list of names who presented papers, etc.; and where can one find a roll of men more distinguished and respected as great in their day and generation? Besides Dr. Gaston, of Atlanta, President of the Association; Dr. Bedford Brown, of Alexandria, Va., the President-elect of the Association; Dr. Hunter McGuire, of Richmond, President American Medical Association; Dr. Henry O. Marcy, of Boston, ex-President of the American Medical Association, etc., each presented papers of merit, or else participated in the discussions. But we intended this note chiefly to attract attention to the fuller report of the session in this December number.

The Association of Southern Medical Colleges

Which organized in Louisville last month, marks an important period in the history of advanced medical education in the Southern States. The importance of this meeting to prospective students of medicine is so great, that we have reported the proceedings of the meeting in this issue of the *Medical Monthly*. We hope all our subscribers will read the report of this meeting and scatter the news broadcast among those of their friends who propose to study the science of medicine.

Many Book Notices

Are crowded out of this issue, although we have added to the usual number of pages of a number. We will not allow any other matter to take the place of this department in the January number.

VIRGINIA MEDICAL MONTHLY.

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RICHMOND, JANUARY, 1893.

Original Communications.

ART. I.—Uterine Fibrosata—Removal of Twenty-Seven, with
Two Deaths.*

By J. M. BALDY, M. D., of Philadelphia, Pa.,

PROFESSOR OF GYNÆCOLOGY IN THE PHILADELPHIA POLYCLINIC, ETC.

It is not many years since it was almost universally taught that fibroid tumors of the uterus were harmless, and that their presence might, with impunity, be ignored. Either women, or the character of these neoplasms, have changed since those times, or there must have been a fearful negligence and indifference to the welfare of many of these sufferers. Possible it is that the profession, being only too fully awake to the danger of the only rational treatment, preferred rather to shirk than to face the issue. However this may be, the tremendous strides of abdominal surgery have put this disease, together with many others, within the number of affections which can be cured with comparative ease.

The symptoms to which the affection gives rise are varia-

* Read before the Philadelphia College of Physicians, November 2nd, 1892.

ble, and are dependent, to a great extent, with possibly a single exception, upon the size and state which the growth may assume. The fibroid tumor, in itself, as long as it remains a true fibroid, will occasion little trouble other than the induction of uterine hæmorrhage to a greater or less extent. As it grows, its presence will, sooner or later, induce irritation of the peritoneal surfaces, thus giving rise to considerable pain, and oftentimes distension. The irritation may even amount to an inflammation, which is apt to be kept up or relighted frequently or not according to the amount of exposure, to determining causes. Pressure within the pelvis, especially, gives rise to very distressing symptoms, even outside of the pain which it causes. The bladder is most frequently irritable, and incapacitated for holding the urine for any great length of time.

It has been my experience to find this organ many times in a condition of chronic inflammation, the urine being loaded with pus. The bowels are mostly constipated, due, to a great extent, to the mechanical obstruction caused by the pressure; and it is a matter of surprise to us, at times, when handling these tumors, how any fecal matter whatever has been able to pass the pelvic brim. Patients carrying a tumor of this class are liable to repeated attacks of peritonitis, attacks which are not always sufficiently violent to endanger life materially, but which render the woman an invalid for weeks, and often months. It would seem, at first blush, that the tumor of a woman who had suffered from one or more attacks of peritoneal inflammation must, of necessity, be adherent to surrounding parts.

This is not the case, however, excepting where the inflammation is septic or specific. A septic or specific inflammation of this serous membrane almost invariably leaves adhesions in its train; a simple traumatic peritonitis is apt to clear up without such serious consequences. Although fibroid tumors are apt oftentimes to be complicated by diseased uterine appendages, and are thus open to the chances of an adhesive inflammation, yet it is a fact that the majority, even of

the complicated ones, are accompanied by few, if any adhesions, even after repeated inflammatory attacks.

The amount of suffering attendant upon these growths is, as a rule, in direct ratio to the complications, and have little or nothing to do with the size, unless that has become enormous. The sufferings of a woman, carrying such a growth, as large as a full-term gravid womb, are frequently not nearly so great as those of one with a tumor which barely rises out of the pelvis.

Much has been written concerning the organic changes in various organs caused by the presence of fibroid tumors. These changes are as often mythical as not. It has occurred to me to find chronic cystitis, and, more frequently, a thickened parietal peritoneum, but otherwise in the twenty-seven uterine fibroids which I have removed, the other organs of the patient have been healthy. In two or three of these, I have found albumin in the urine, but it was evidently due to pressure, as it cleared up in all but one case almost at once after operation. In all of my patients, with this one exception, the kidneys have been healthy. The ureters have never been observed in an abnormal condition; the bowels have been normal, and the other abdominal organs have remained unaffected. I find myself, therefore, unable to subscribe to the oft-repeated cry of the dangers of irreparable organic changes in the abdominal organs due to the presence of fibroid tumors of the womb. It has been my lot, however, to find frequent sarcomatous change taking place in the tumors themselves—tumors which had formerly been apparently perfectly healthy. Diseased uterine appendages accompanying the growths have been observed very frequently—in fact, in the majority of those which have come under my notice. Pus tubes, hydrosalpinx, old chronic salpingitis, with great hyperplastic enlargement of the ovaries, ovarian cysts, ovarian abscesses, have been the most frequent complications. One case of broad ligament tumor, or, more correctly, uterine tumor, which had grown into and between the folds of the broad

ligament, was complicated by adhesions to several coils of intestine; these being released, and the tumor left *in situ* on account of the risks of the operation, the symptoms all subsided, and there has never been a return of any of them, it being now more than a year and a half since the operation.

The old methods of treating this disease have not much to recommend them. As applied to many cases of uterine fibroma, they will probably answer as well as anything, because many cases require no treatment at all; in other words, the mere presence of a fibroid tumor is no warrant for dosing the patient with purgatives, ammonia, ergot, hydrastis, electricity, and similar remedies. It must not be expected that the tumor can be gotten rid of short of surgical methods, and these are to be reserved for special cases. When it comes to dealing with symptoms, however, these remedies all have their place and are capable of doing much good, provided they are used judiciously. Rest in bed, purgation, counter-irritation, hot douches, electricity, etc., will frequently relieve the pain, which is most often due to peritoneal irritation, and which should be treated on general principles. The curette, especially for small growths, ergot, hydrastis, atropia, electricity, and similar remedies, come into play for the hæmorrhages, and will temporarily control the bleeding. If one is able to accomplish this much—control the pain and hæmorrhage—he has often accomplished all that the patient desires, and it would be hard to persuade her into having an operation performed. If the inflammatory attacks are not recurring, and the hæmorrhage is not excessive, provided the tumor is not so large as to cause trouble by its size, the patient may rest content with her present condition, especially if she is approaching the menopause. It by no means follows, as has been so often taught, that most of these neoplasms cease to grow at this period of life. On several occasions has it been found necessary, in my experience, to remove the uterus, together with the growth, in women forty-eight or fifty years of age.

Yet, an occasional case occurs in which the change of life ends the period of suffering, and the growth ceases to cause active symptoms. In view of this fact, if the woman is near the time of her change, it may be worth her while to wait, provided that her symptoms are not too distressing. Each of these cases must be a law unto itself, as far as the consideration of surgery is concerned; and yet fairly accurate lines can be laid down along which it will be safe to advise any given patient.

1. All rapidly-growing fibroid tumors in young women (before thirty-five) should be removed, and many of the same kind as late as forty years of age.

2. All cases in women under forty, where there is such loss of blood as to enfeeble the general health, and which is not readily controlled by treatment.

3. All cases under forty in which there are frequent recurring attacks of peritonitis.

4. Cases which have gone several years past the menopause, with excessive, uncontrollable bleeding, or recurrent attacks of peritonitis.

Such advice as this would, a few years ago, have seemed unwise and unsafe; but, in view of our present successes in the surgery of such growths, we are justified in adopting more radical measures than formerly. No one can doubt but that a woman is better and safer without a fibroid tumor than with one; and, therefore, the only questions worth considering are with how much safety can they be removed, and is there any surer or safer method of removing them than by extirpation?

Oöphorectomy has been proposed and practiced in times past for the purpose of accomplishing this object, but has proven itself both unsatisfactory and unreliable, besides being almost as dangerous as the removal of the tumor. The operation, excepting for small, pelvic tumors, has passed out of use. The claims made for electricity, as far as the removal of fibroid tumors are concerned, have proven, as predicted, fallacious; and to-day none but the most en-

thusiastic electro-gynæcologists are making any claims in that direction, and these claims are made invariably without proof. The removal of a healthy non-adherent fibroma of the womb should be and is attended with but a small percentage of danger.

Of the twenty-seven tumors of this character which it has been my fortune to remove by the extra-peritoneal method, but two (about 7 per cent.) have died. In neither of these cases could the fault be placed on the operation, but rather on the operator and the previous treatment. The first death was that of a colored woman, with a tumor which weighed much over twenty pounds. During the operation a towel (which had been prepared for the purpose) was placed in the abdominal cavity, to hold the intestines in place, while the necessary steps for treating the pedicle were carried out. This towel infected the peritoneal cavity, and the woman died five days later of purulent peritonitis. The second patient was a white woman, whom I had seen three years before in good health, with a healthy, movable tumor. At the time of the operation she was an emaciated, bed-ridden woman, with a rapid, feeble pulse, a high temperature, and deeply septic. The tumor was fixed by adhesions, and a sinus which discharged pus freely was found on the outside of the left labia majora, and pus was flowing from the vagina. The intestines and omentum proved to be adherent to the tumor; the tumor was adherent to the whole pelvis; both ovaries contained pus, and the external sinus opened into the left ovary, and both ovaries and tubes were universally adherent. When the uterus, tumor, Fallopian tubes and ovaries were all freed and delivered and removed, there remained sinuses in the vagina and in the cellular tissues about the vaginal sheath. These terrible complications all followed a course of treatment by electro-puncture in the hands of an expert. That the patient died of purulent peritonitis was surely no discredit to hysterectomy. With these two exceptions, all the tumors of this character which I have removed by the method which I almost invariably adopt have had an easy conva-

lescence, as a patient who has had an operation for a simple ovarian cyst would have had.

The method used has been that known as the extra-peritoneal treatment of the stump. In this operation the tumor is turned out upon the abdomen, and a wire clamp is placed about the base of the neoplasm, in order that it may constrict it and control the bleeding. A transfixion pin is then placed above the wire, to prevent it from slipping up or the stump from being pulled down through the grasp of the wire. The stump is then fixed in the lower angle of the incision and the abdominal wound closed. Whenever there is an inclination for the stump to bleed, the wire is screwed tighter, and any danger of hæmorrhage is thus avoided. The advantages of this plan of treatment are, first, that the stump is under perfect control, and if it shows any signs of bleeding, it can be checked instantly by screwing up the wire; secondly, if there is any septic matter in the cervical canal, or about the stump, it is outside of the abdominal cavity, and may suppurate with safety; thirdly, all raw or denuded surfaces are outside of the peritoneal cavity, and there is no chance for adhesions to form between them and the intestines.

The disadvantages claimed for this method of treating the stump are, that the free action of the bladder is interrupted and that hernias are apt to follow at the point where the stump was originally fixed. The bladder certainly is irritated as long as the wire is kept on the stump; but this is corrected as soon as the stump has sloughed away or the wire is taken off. In but two cases have I seen hernia. In the one patient, it appeared at the site of a drainage tube, which had been used, and was more than an inch above the pedicle, and could consequently not be put down to anything but drainage. The second hernia appeared at the site of the old stump. The operation had been done in the case of a large sarcomatous uterus, which was cut away, and the stump treated outside the peritoneal cavity. As a matter of course, there was not good union between the sarcomatous tissue of the stump and the surrounding tissues, and

I was not at all surprised when the woman returned with a hernia. That the hernia did not appear on any of the other cases is pretty fair proof of the fallacy of the criticism. The dangers of septic peritonitis from a sloughing stump is a familiar battle-cry with those who are opposed to this method of treatment. Such a cry must be born of lack of experience. In no single case was there any such accident, although many of the stumps sloughed; in fact, it is this danger of septic peritonitis that is avoided by the above method of treatment of the stump.

There is an occasional fibroid tumor of the uterus that cannot be brought out of the abdominal wound so as to place a wire about its base. This is caused by the fact that the growth has split open one or both broad ligaments, and has developed between its folds. In these cases, it becomes necessary, if the tumor is to be removed, to tie off the broad ligaments and secure both the ovarian and uterine arteries; in which case, it is probably best to then drop the stump back into the abdominal cavity or remove it entirely. However advantageous and easy this method may be in skilled hands, experience has taught me that as yet the extra-peritoneal method has proven the safest and surest, and the time has not yet come for substituting for it other methods which have not been fully tried and matured. For the present, at least, a beginner in hysterectomy should think of but one method of treating the stump (the extra-peritoneal) where that method is practicable, and as a matter of fact, in the vast majority of cases it is practicable. It is both the easiest and safest method to begin with, and if, after mature experience, one wishes to deviate and adopt a method which will give a less prolonged convalescence, he will find, if he has skilled fingers and a cool head, some of the extra-peritoneal methods now being rapidly developed, both comparatively safe and sure, but much harder of performance and with many more elements of danger.

ART. II.—Congenital Chorea—Two Cases—Remarks—Selected Cases from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

By JOHN DUNN, M. D., of Richmond, Va.,

CHIEF OF CLINIC OF RICHMOND EYE, EAR, AND THROAT INFIRMARY.

CASE XV.*—A Case of Infantile Meningeal Hæmorrhage—Result so-called—Congenital Chorea—Blindness?—Deafness?—Remarks.

July 27th, 1892.—History is as follows: Claude F., born November 15th, 1891; birth natural; head presentation; time from first pain until birth of child, three hours; has three brothers and one sister, all healthy; no evidence of past specific history. The night following the birth of the child the mother remembers to have had her attention called to the fact that the child noticed the lamp in the room. On the second night after its birth, the child began to scream; to foam at the mouth, and to "gum" or "suck" its tongue so violently that the froth coming from its mouth was bloody; at the same time, the child had severe convulsions, during which its forearms were flexed upon its arms, and its fingers "clinched;" its eyes turned upwards as far as possible. These spasmodic contractions lasted about ten minutes. The child was fretful, and cried for several hours following them. About six hours after the first attack, a similar attack of "spasms" set in, which again lasted about ten minutes. On the fifth and eighth days after its birth, the child had similar attacks of about the same duration; since then, there have been no severe convulsive attacks. During the last attack the child turned a "water-wave purple" all over, and the mother feared instant death would take place. Since the last attack, the child has never voluntarily moved its arms, which are flexed at the elbow, the fists balled, and held close to the side. It has been able to move its legs, although all its strength seems to be in the thighs, and all the movements seem to originate at the hip-joint. If the child be held up by the arms so that the legs hang free, the heels are seen to be drawn up so that the toes point to the ground, in which position they remain,

*The numbering of these cases refers to the order in which they are being selected for Report and Remarks from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

flexion of the ankle being lost. The child has never made any effort to move its body. If the child be held up, and its head be placed forward so that the chin rests upon the chest, it remains there, the muscles of the neck making no effort to raise it; while if the head be held erect, it will fall backwards as far as possible, and then remain in this position, the child being unable to raise it. When the child is lying on its back, with its head resting on a pillow, it has the power to roll its head from side to side, and often does so in quick succession. Several times a day the child will roll its eyes up and down spasmodically; while all during the day, and even when the child is asleep, there are noticed spasmodic jerkings and twitchings of the feet and arms. The child has never "taken notice" of any object or sound. Shaking objects close to the eyes does not cause the eyes to wink. The child takes no notice of a cap fired close to its ears. The pupils respond to light, are normal in size, and dilate under atropia. Ophthalmoscopically the fundus is normal, unless there be a slight paleness of the optic discs. There is no paralysis of the eye muscles, nor of any of the muscles of the face. For the first few days after its birth, the child showed no desire to "take the breast," and it was only after considerable "training," that it learned to avail itself of this source of nourishment. Although the child will not notice a strong light, when flashed into the eye a second or a third time, it seems to experience some sensation the first time, for it will turn its eyes towards the light, but as quickly turn them away. The child seems to know its mother, but whether it has learned to know her through the sense of touch or of hearing, it is hard to say—probably through the former. Although it will not notice even loud noises close to its ears, when its mother is talking to it, the child shows a certain degree of satisfaction, as though the sensations it perceived were pleasurable. The child has never made any effort to sit up, or crawl, or speak. Mercurial inunctions and pilocarpine were ordered.

September 6th, 1892.—The above treatment has been persevered in, more or less faithfully, with the result that the infant no longer carries its arms flexed at its side, but can move them about with considerable freedom. Light seems to make more impression upon the eyes than when treatment was begun. In other respects, there has been no amelioration in the condition of the child.

November 15th.—Condition about the same.

Both the history of the case and the symptoms point to meningeal hæmorrhage as the cause of the trouble. The cause of the hæmorrhage—it is difficult to make, in this case, a probable conjecture; it seems little likely that, as in the great majority of these cases, it was “due to the special conditions of parturition,” for the birth was, in every way, normal and easy, and for forty-eight hours the child was apparently perfectly healthy, and “just like other babies;” furthermore, during this time it did what it has never done since, noticed a light when brought into the room at night, *While* it is true that, in a majority of the cases of infantile meningeal hæmorrhage, “nothing particular is noticed in the condition of the child during the first few days or weeks of life,” this very *while* makes it not improbable that the hæmorrhage, in a certain proportion of these cases, is the result of injury received after birth, rather than at the time of birth. Perhaps, in dressing or in handling this child, the injury was done to the head that resulted in the hæmorrhage. The spasms, and the epileptiform foaming at the mouth, appeared as symptoms that the hæmorrhage was in such quantities as to produce compression with irritation, or perhaps destruction of the brain cortex in its vicinity.

The localization of the seat of the hæmorrhage in this case is more difficult than is generally the case in brain lesions, the majority of which can now be made with considerable accuracy. The difficulty lies in the extent of the lesions. The lesion affects, as far as we may see, both sides alike, and to an equal degree. The symptoms point to a hæmorrhage from the region of the longitudinal sinus, which involved most likely, by compression, large areas of the brain cortex on either side. Whether or not the median surfaces of the brain are affected is uncertain.

It is a question whether the child is blind, or whether it is unable to distinguish between the objects that pass before the eyes; whether it is blind, or whether it is utterly unable to interpret the sensations produced by pictures upon the retina; whether the higher centres for sight have been de-

stroyed; whether, if the higher centres, the interpreting areas, have been deprived of their function, there will occur atrophy of the optic nerve as a result.

At present, the condition of affairs seems to be about as follows: The pupils respond to light, showing the reflex arc for light is intact; the optic media being healthy and normal, pictures form upon the retina, and corresponding nerve-waves start along the optic nerves for the sight sensorium, this being injured to a great degree or destroyed, the optic nerve sensations are not interpreted at all.

While from the standpoint of usefulness it is the same to the child whether it is blind, or whether it is deprived of the power of interpreting the significance of *what it sees*—(i. e., of the retinal impressions), from a medical view the two conditions are different, and it will be interesting to know if a continuance of the second condition will ultimately, as a necessary consequence, result in the first. Perhaps not. The disturbance to the sight-power was probably the result of compression to the brain cortex in the region of the occipital convolutions and the cuneus. If these convolutions have been compressed to such a degree that atrophy has resulted, or if these convolutions have been destroyed, actual blindness is the condition from which the child suffers. If the destruction has been complete, it is no longer a question of light, or darkness, or form, or color, for these cannot then exist for the child, who is left in the condition of a being created without the sense of sight—one to whom perpetual darkness means no more than perpetual sunshine, and one to whom these terms must remain incomprehensible. If, on the other hand, these sight areas be perfectly healthy, while there has been a destruction of the association fibres, which connect the sight areas with the other parts of the brain (and the best marked of these association tracts connect the occipital lobes with the frontal lobes, sight with the intellect), then while the optic fibres bring intact the sensations of color or of form to the occipital lobes, there is no interpretation of the meaning of these sensations. The infant suffers from *idiot blindness*.

It would, again, be interesting to know, in this latter condition, how far instinct would develop reflexes from these sight sensations; how far these sight sensations could be the source of pleasure or discomfort; whether there would result a certain amount of gratification in opening the eyes to the light of day rather than to darkness.

There is still another question just here: Are these cortical areas, if irritated, the source of hallucinations purely visual? Are there, from time to time, sparks or flashes of light of various colors before the eyes, such as at times result from irritation of the occipital convolutions?

A similar series of problems offer themselves for solution in regard to the power of hearing. Sound-waves reach the ear-drums; these vibrate, and the vibrations are transmitted to the terminals of the nerves of hearing, whence awaked waves proceed until they reach the impaired or destroyed centres for the interpretation of these waves, and again the child may be physically deaf, or may suffer from *idiot deafness*.

As regards the interpretation of stimulations affecting the nerves of smell or taste, the infant is too small to make experiments with the hope of success. No diminution can be shown of the sensations of pain or touch. The irregular spasmodic movements, choreic, which present themselves in this case have the peculiarity that they do not cease during sleep, and are often severe enough to awaken the child; they differ in this respect from the large majority of other cases of chorea.

The prognosis in this case is bad. It is not improbable that large areas of the brain cortex are compressed or worse injured. As the brain substance, once destroyed, is never regenerated, the chances are that the mental powers of this child will remain weak beyond hope. And there is no way of accurately forecasting the ultimate condition of the child. It is highly probable that as time goes on, it will gradually acquire more or less control of its arms and legs, the movements of which, at present, show marked incoordination. A

certain proportion of these cases, however, improve beyond what seems to be a reasonable expectation in the light of the nature and duration of the symptoms.

Mercurial ointment was prescribed with the hope that it might hasten the absorption of the remains of the hæmorrhage—not from the belief that the case was syphilitic, and the improvement obtained must, in all likelihood, be attributed rather to time than to the *vis medicatrix medicinæ*.

CASE XVI.—A Second Case of Congenital Chorea—Child 13 years of age, who can See and Hear, but who has never loarned to Speak, and as yet has never been able to learn to Write—A Supplemental Case to Case XV—Diminution of the Choreic Movements, with the use of Glasses.

The following case, which came under my observation after the notes upon Case XV had been made, serves to bring up several interesting phases of the results of infantile meningeal hæmorrhage, which phases were, in the above case, from the nature of these reports of cases, necessarily omitted :

Annie Page, aged 13; birth prolonged and difficult; healthy brothers and sisters; brought for treatment because she had “never learned to talk like other children;” is small for her age; head is very small; patient badly nourished; arms and legs not out of proportion to her bodily development, although both are poorly developed; right grip weaker than left; no demonstrable fault of larynx, pharynx, palate, etc., under laryngoscope; no form of facial paralysis; there are spasmodic jerkings of the muscles about the corner of the mouth, more frequent on the right side; these spasms occur every minute or two, and cause the face to assume a silly smile; there is also a spasmodic winking of the right eye. The choreic movements affect both arms, producing, especially, a spasmodic shrugging of the shoulders; these movements occur more frequently in the right than the left side, and, as far as I can judge, these choreic arm movements are all produced by the shoulder-movements. The little girl did not learn to walk until she was 3 years old. As she could move her arms and legs with considerable freedom, and as she could not sit up, the weakness

must have been in the muscles of her back, from which weakness she has not as yet entirely recovered. The patient has had both varioloid and measles, and the eruptions of both diseases were confined entirely to the right side. She was vaccinated at the same time in both arms; in the left arm, the virus "failed to take."

The interesting features of the case are that the child has never learned to talk, and cannot be taught to write—"because she cannot remember her letters," says her mother. The child hears fairly well, and understands what is said to her. Told to repeat the alphabet after me, her vocal apparatus emitted the following sounds:

a was a,	j was äe,	s was äe,
b was b,	k was äe,	t was e,
c was e,	l was äe,	u was e,
d was e,	m was äe,	v was e,
e was e,	n was äe,	w was r (German ā),
f was äe,	o was o,	x was äe,
g was e,	p was e,	y was i,
h was a,	q was e,	z was äe.
i was i,	r was r (German ā)	

If asked her name, Annie Page, she will reply "äe a." For yes, she says "äe;" for no, she says "or." There is, however, no rolling sound to the r, but the "or" is the German ā. If we examine a moment the child's power to pronounce sounds, we shall see it is very limited. Its alphabet consists of a, b, e, i, and o, and the German ā; all purely vowel sounds, except b, which the child can say distinctly. The child endeavors to answer any question asked her, but her words are combinations of the above vowel sounds. If asked to repeat any word of more than one syllable, she says always "äe." The patient knows a number of the letters by sight, but can be taught to make only two of them, a and b, and these two letters but imperfectly. The endeavor to make any other letter results in the formation of an o. The child's sight is imperfect, owing to the existence of a high degree of hyperopic astigmatism; for several years, at varying intervals, the child has been subject to visual hallucinations; "has seemed to see objects before her which no one else in the room could see; she would run to me, bury her face in my lap, and then, from time to time, would look out, and would again hide her face as though she still saw something." The child has been less subject to these hallucinations for the past year or two than formerly.

This case is again one of infantile meningeal hæmorrhage, and the parts of the brain which, it would seem, was the seat of the greatest permanent injury, are Broca's centre, the posterior part of the third frontal convolution, and what is supposed to be the centre for movements necessary for writing, the posterior part of the second frontal convolution, and the immediately adjacent areas, and these areas of the left side—perhaps both sides, but greater on the left. Although this seems, at first blush, to be a satisfactory solution of the question of localization, the problems of the case are not settled so easily. The child recognizes objects seen, knows their use, understands spoken language, can carry in her mind commands given her and will obey them; nor can it be proved, so far as I can judge, that the sensations of touch, of feeling, or of smell, are misinterpreted by her. All this goes to show that the regions of the brain where perceptions of sight, of touch, of smell, of hearing, are stored away and correlate, resulting in ideas, have retained their functions. No apraxia can be proven. The patient has, however, true motor aphasia, almost complete. Say to her, "Do you know what a chair is?" She will reply, "æe," while the expression of her face shows that she understands you. Point to a table and say, "Is that a chair?" Her reply is "or." Point to the chair, she says, "æe." Say to her, "Say chair," and her reply is "æe," while the expression of her face shows that she is disappointed at her failure, which she recognizes, to repeat the word you have spoken. This seems to show that the part of the brain (Broca's centre), where normally is stored away—not the memory of the spoken word, chair, but the memory of the combination of motions necessary to the sound production of the word chair—is not functioning. The auditory centres for spoken words is intact, and impulses start from this to the centre for originating spoken words. These impulses reach a diseased, perhaps, in a great measure, atrophied area, and result in the production of the sound "æe," which, as soon as spoken, is recognized by the child's auditory centre for spoken words as incorrect, and results in the facial expression denoting

dissatisfaction. There seems to remain of Broca's centre a part capable of performing, to a certain small degree, its functions, for the child can repeat, after you, a, b, e, o, i; but, although she can do this, she cannot make intelligible use of these sounds in words containing them, and most of her endeavors to repeat words after you, no matter what the word is, result in "äe."

So, too, there seems to be destroyed, in a great measure, the posterior part of the second frontal convolution, the centres where should be stored away the "memory," of the combination of motions necessary for the making of letters and words, the writing centre. The child recognizes more letters than she can make; but, as the child is unable to pronounce letters, it cannot be said how many letters she has learned to know by sight. After years of trial, she has succeeded in learning to make a and b; the a is a capital letter, and she will leave out the mark that crosses the angle; and she often makes the b, which is also a capital, backwards; showing, it would seem, that the above-mentioned centres are badly damaged. Tell her to make c or d or e or f, or any of the other letters of the alphabet, she will take the pencil in her hand; seem to understand what you want her to do; her fingers will move the pencil over the paper, and the result will be approximately an o; and after it is formed, and she sees it, often an expression comes on her face which seems plainly to say, "That is not right." The eye recognizes that the hand has failed to respond to the impulses sent to the writing centre from the sight-memory areas.

Thus, without going more into details just here, it would seem that although there is no paralysis of the muscles necessary for writing or speech, the brain centres, where normally are stored away the muscle memories of combinations necessary for writing and speech, are greatly injured. Nor does it seem likely that the child will ever acquire the power of speech or writing, the damage to these centres being permanent.

There are one or two other points of interest in connection with the case. After the child's eyes had been fitted with glasses, and she had worn them a short while, the frequency of the choreic movements about the right eye, the mouth, and shoulders, diminished markedly. They have not, however, ceased entirely. This fact seems to show that in cases of congenital chorea, and it is fair to suppose that the same thing applies in cases of acquired chorea, that the undue stimulation of the brain centres for the eye muscles, which results necessarily when there is eye-strain due either to defects of refraction or lack of equilibrium of the external muscles of the eye, may reflexly increase the excitement in the areas whence the choreic movements have their origin, and hence augment the frequency of these choreic movements; and, in like manner, may, in cases of epilepsy, increase the number of attacks.

In an uncertain proportion of cases of epilepsy, chorea, and some other troubles, which the nature of this article does not allow us to look into, the prime causes of the chorea or epilepsy may, of themselves, be sufficient to precipitate their peculiar convulsive movements only under certain conditions, and then with little frequency; reflexly, however, upon undue excitement in the areas regulating the movements of the eye-muscles, there may result sufficient excitement to precipitate these attacks with increased frequency. Thus it has happened that cases of epilepsy, chorea, etc., have been reported as cured by relief of eye-strain due either to refractive conditions or to want of muscular equilibrium, whereas alleviation has been given only as regards the number of the attacks, which alleviation has been far more marked in some cases than others.

The further lesson from this observation is that in all cases of chorea or epilepsy the condition of the eyes should be carefully looked into, and any departure from the normal should be carefully corrected; and while I doubt the possibility of obtaining many permanent cures, in these diseases, by the correction of refractive errors, or the methods

of partial tenotomies, great relief may be afforded to patients who may seek relief in vain from other sources. (So far from wishing to cast a slur upon the methods used for the restoration of the equilibrium of the eye-muscles by partial tenotomies, and the results obtained by them, in my opinion the introduction of the terms exophoria, esophoria, hyperphoria, etc., marks the period in the advance of our knowledge of the eyes, the greatest since the days of von Græfe) Further remarks upon this subject will be omitted for the present.

The prognosis in this case is bad, and while continuous endeavors will be made to cause the patient to utilize the sounds over which she has control, in the pronunciation of simple words in which they occur, there seems little hope that she will ever learn to talk or to write.

ART. III.—Rare Effects of Malaria—Transient One-Sided Swelling of Face.

By N. L. GUICE, M. D., of Natchez, Miss.

Ex-PRESIDENT MISSISSIPPI STATE MEDICAL ASSOCIATION; EX-PRESIDENT ADAMS COUNTY MEDICAL SOCIETY, ETC.

R. V., æt. 25, born in Odessa, Russia, gives the following history: Has been in America seven years, during all of which time has resided at Natchez, Mississippi. Has enjoyed uniform good health, and never suffered from any form of malarial disease prior to May, 1886, when he had a spell of intermittent fever which lasted a period of eight months. Three or four months after having been relieved of this attack, a peculiar swelling appeared on the right side of the face, lasting about twelve hours, and recurring with strict regularity every third day. After appearing a few times the tumor would disappear for a few days, and then again recur, the same as paroxysms of fever in malarial cachexia.

The first appearance of the tumor was in 1887, it being confined (this time) to the right side of the face, and finally disappeared without treatment, as he claimed he found no physician who was able to give a diagnosis or suggest treatment for the same.

In July, 1888, having been then five or six days on a business trip in the alluvial region of Louisiana, he awoke in the morning and found the same swelling, but this time on the left side of his face. After this appearance it did not recur for one week, when on July 17th, it again appeared, after which it occurred regularly every third day, always appearing at about the same hour in the morning, and in same spot over left malar bone.

July 29th, 12:30 P. M.—Patient came to my office with distinct swelling over left malar bone, and extending across under the eye, which had been closed, but was now open from recession of the tumor, which had appeared at four o'clock in the morning.

It now extends three inches transversely and two perpendicularly. The tumor presents a puffy feel; is composed of the (swollen) skin and subcutaneous areolar tissues, and is movable, as these structures are normally. Pulse normal, temperature $98\frac{1}{2}^{\circ}$, tongue slightly furred, and edges crimped. Patient says he feels a "little bad," and has slight headache, all of which he ascribes to intemperate eating. All secretions normal and appetite good, and he attends to his duties as outdoor clerk for a wholesale house.

The patient, who is educated and intelligent, described the tumor as appearing very suddenly, with no premonitory sensations or symptoms, and always attaining the maximum development within five minutes, and never attended with pain or unnatural sensation, being often first discovered and pointed out by an associate. Remaining at the maximum size for "a few hours" the tumor then began to recede and faded out gradually thereafter, the involved tissues returning to the normal state about twelve hours after inception of turgescence. The tumor never at any time crossed the median line of the face, where it stopped abruptly; never appeared back of the ear or upon the hairy scalp, nor below the lower margin of the submaxillary bone.

I thought it not difficult to diagnose this case as one of vaso-motor tumor, due to malarial influence, and accordingly prescribed gr. v. of quinine sulphate, and gr. j. of dessiccated sulphate of iron every six hours. This arrested the trouble promptly. But fearing another return at some septennial period, to eradicate the malaria from the system, I gave three times a day, after meals, for twenty-eight days, a pill composed of quinia sulph. gr. ij.; ferri sulph. exsic. gr. ij.; acid, arseniosum, gr. $\frac{1}{20}$ th, and ext. gentian q. s. to form mass.

There has been no recurrence of the tumor up to the present time, and patient has otherwise enjoyed excellent health.

While on the subject of rare effects of malaria, I would mention a point which I have never seen in print, to-wit: An individual residing in a locality in which malaria is known to prevail to a marked and (as relates to health) dangerous degree, such, for instance, as the alluvial or swamp region of Louisiana, leaving his home, say in August, September, or October, when the miasm is most abundant and active, and visiting an elevated and less malarious region, will develop the intermittent or other form of malarial fever in from two to ten days. This I have seen verified in many instances, and have thus witnessed the prostration of the majority or all of families of six or eight members composed of adults and children.

This peculiar phenomenon I saw verified a few days since (October 20th), in an otherwise stout and healthy young man, who was seized with tertian intermittent on the third day after arriving in this city (Natchez, Miss.) He had lived through the summer on Black river, Louisiana, a notoriously malarial (alluvial) region, where he had enjoyed, as he alleged, perfect health up to the time of leaving his home.

My attention was first called to this peculiar (malarial) phenomenon by an intelligent planter of Tensas Parish, Louisiana, about ten years ago, and I have since seen it verified in several instances as applied both to individuals and families, and in the majority in those coming from the Louisiana swamps into this city, which is remarkably free from malaria—so much so indeed, that it is exceedingly uncommon to witness the development of any form of malarial disease in persons residing continuously within the corporate limits of the city.

ART. IV.—Valvular Disease of the Heart—When, and When Not to Use Digitalis—A Clinical Lecture.

By WILLIAM C. DABNEY, M. D., of Charlottesville, Va.,

PROFESSOR OF PRACTICE OF MEDICINE AND THERAPEUTICS, ETC., IN UNIVERSITY OF VIRGINIA, ETC.

The case which I wish to study with you now, gentlemen, is one which all of you have examined carefully. This old man has been coming to our clinics off and on for some time, and his case is a very instructive one to you.

He is over 70 years old, and, as you see, is quite infirm. I want you to notice especially that there is no swelling of his feet, nor of any part of his body in fact, but I called attention to his feet and ankles especially because cardiac dropsy usually commences there.

You noticed, too, when you were examining him that his arteries were very rigid, and you could press on the radial and still roll it under your finger below the point of pressure. This is one of the best evidences of calcareous degeneration of the walls of the vessel; then I asked you to notice, too, that his pulse, while it felt strong at first, was not really a strong pulse; it was *small*, the apparent strength being due to the hardness of the arteries.

It is not often that we see a case in which the arteries are more rigid than they are in this old man, and it is a significant fact that he has been a "striker" in a blacksmith shop. We have still much to learn as to the causes of atheroma; but one thing is quite certain, namely, that *strain* has much to do with its occurrence.

Then, when you examined this old man's chest, you noticed that the apex beat of the heart was a little *outside* of the left nipple; you know this means hypertrophy, but not any *very* great degree of hypertrophy; and, furthermore, you found, on listening, that there was a loud murmur over the region of the heart.

There were several points connected with this murmur, which I asked you to observe particularly: First, it was heard most distinctly at the second intercostal space on the

right side, and hence the aortic valve is the one diseased in this case; secondly, it corresponds in time to the systole of the heart, and hence is made when the blood is passing from the ventricle into the aorta; and thirdly, the sharpness of the sound is especially striking.

Now, what causes this sound? I think you will say that it is due to obstruction at the aortic valve, and it is almost certain, I think, that there is some obstruction there because the pulse is rather small and slow; but I think the sound is produced chiefly by the passage of the blood over a rough atheromatous plate. Everybody knows that water running over a rough, hard, uneven surface will make far more noise than if it was flowing at the same rate of speed, and under the same pressure, over a smooth surface. Now, the same principle holds good here, and please let me digress for just a moment to call your attention to one or two other points which I think will help you very much in studying heart-murmurs.

If you force water through the nozzle of a syringe under slight pressure, very little noise will be made, but if you force it out with great pressure, a much louder sound will be produced. Now, exactly the same thing holds good with respect to the heart; the sounds in aortic stenosis and mitral regurgitation are usually quite loud sounds, and have quite a wide area of diffusion, because they are produced by the contraction of the strong left ventricle; on the other hand, the sound produced by a mitral stenosis, while it is harsh in character, is not usually nearly as loud, nor is its area of diffusion as great.

Another point yet, which I beg that you will remember, is that a certain degree of strength of the heart is necessary to make the cardiac murmurs audible at all; and sometimes when the heart's action becomes very weak, sounds which *had* been perfectly distinct are no longer audible.

But to return to the case before us. This man says that the dyspnoea on exertion has come on lately, and has compelled him to give up his work, and he says he has had lately a troublesome cough.

Now, what do these symptoms signify? I think they point to a commencing failure of compensation. The left ventricle is no longer able to do all the work required of it, and the consequence is the cavity is beginning to dilate, and there is some slight regurgitation at the mitral valve, which is causing a passive hyperæmia of the lungs. The earliest symptom of a break of compensation usually is dyspnoea on exertion.

I do not think, in view of the account of this patient, that much can be done for him, but I hope that we can at least give him some temporary relief.

The *indications of treatment* are perfectly plain. We want to increase the nutrition of his heart as far as possible, and to stimulate the muscle to more vigorous contraction; and there are three remedies which are useful in this condition, and which I propose to give him in combination—they are iron, arsenic, and strychnine. Of these, strychnine will do him more immediate good than either of the others, but I think the iron and arsenic will improve his nutrition somewhat.

You will observe that I do *not* give him digitalis, and I have several reasons for not doing so: in the first place, he has no dropsy; secondly, he is passing an abundance of urine, and so long as a patient with organic heart trouble of this kind is passing urine in abundance, he rarely, if ever, needs digitalis.

But besides this, this old man has very hard, chalky and brittle vessels, and such vessels are much more liable to rupture than if they were healthy; now, digitalis increases the blood pressure, and of course any increase in the blood pressure increases the danger of rupture of a vessel in the brain, or apoplexy.

In any case of cardiac disease, when compensation is failing and dropsy occurs, digitalis is *invaluable*. I am now attending a case in which the gravest symptoms were present—great dyspnoea, pulsation of the jugulars, dropsy, and a scanty flow of urine; under the use of digitalis, the flow of

urine has increased *very greatly*, the dropsy has diminished, the heart's action has become far more regular, and the dyspnoea is far less troublesome.

But I will show you now a case which you have seen before, and I want you to see the effect of the digitalis which we gave this woman. It is not a "heart" case, it is true; but what I want to illustrate just now is the *effect of digitalis in certain cases of dropsy*. This woman's urine, as you see, still contains a great deal of albumen; but see how greatly the dropsy has diminished since she was here a week ago. She has been taking, during that time, 1 grain of digitalis, 1 grain of squills, and 2 grains of nitrate of potash, three times a day. See how much clearer the urine is before I treat it than it was a week ago.

If you will just remember two or three points, I think you will readily understand *under what circumstances digitalis is indicated in heart or other diseases*. Remember, first, that the amount of urine discharged depends, in *great* measure, on the blood pressure in the arteries; remember, secondly, that in all cases of dropsy from cardiac disease, the arterial pressure is diminished; and, lastly, remember that digitalis increases the blood pressure more than any other drug of which we have any knowledge.

ART. V.—Aneurism of the Ascending Arch of the Aorta—Report of a Case.*

By LLEWELLYN ELIOT, A. M., M. D., of Washington, D. C.

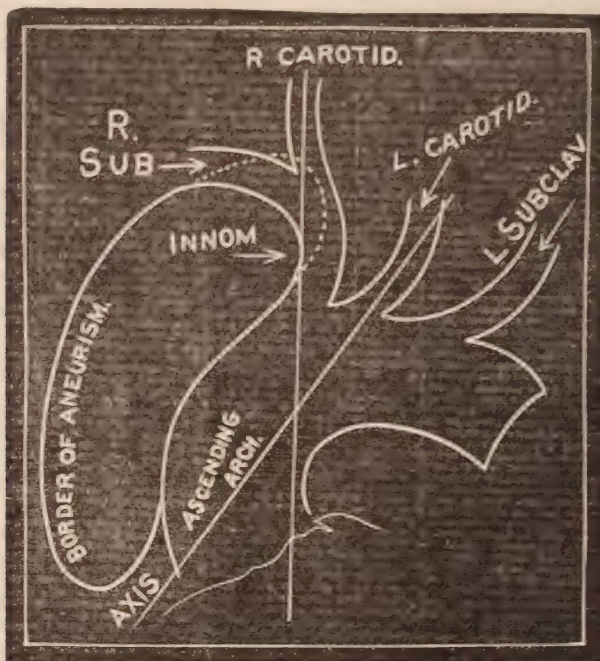
The following history of a case of aneurism of the ascending arch of the aorta, as diagnosed during life, is presented for consideration.

Wm. C. M., white, aged 48 years, born in Pennsylvania, clerk by profession, came under my care on August 20th, 1892.

His previous history briefly, was as follows: Has had a long army service; is subject to attacks of rheumatism,

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, November 14th, 1892.

diarrhœa, and bronchitis; never had any venereal disease; has been a free smoker, and until eight years ago, was a hard drinker, but cannot now use any form of stimulant. About three years ago, while lifting heavy weights, he felt something give way, and he became faint, being unable for a few days to continue his work. He complained of pain in the right breast, which was supposed to be rheumatic; a physician guessed it was something growing in there; this went without verification until about fifteen months since. Then he was placed upon the pension rolls for "rheuma-



tism, disease of heart, and aneurism of right innominate artery."

Examination showed great dyspnœa, incomplete loss of voice, bronchitis, râles over both sides of chest, attacks of suffocation, inability to lie down, sleeps propped up on pillows, is flighty at times, pulse small, 120 at each radial, measurement of aneurismal sac is three and one half inches wide by four and one-half inches long, and pulsates at the second right interspace. The pressure of the head, in examination, causes suffocation. Was in a comatose state all

day before my visit. Has been treated with iodide of potash with benefit, but he failed to continue it long enough to obtain any permanent benefit. Was given iodide of potash and camphorated tincture of opium.

Although visited at regular intervals, no full notes were made until September 2nd, as there was little change in his condition.

Sept. 2nd.—Is taking beef peptonoids as nourishment; cannot swallow anything cold, everything must be warmed, as cold causes him to gag; does not have as much difficulty in breathing, voice stronger, takes sodium bromide, gr. v, every hour, for its sedative effect, tincture opium (camphorated) for cough, and a pill of aloin, belladonna and strychnine for the bowels. Still sits up.

Sept. 4th.—Had a sinking spell during the night, from which he rallied very slowly.

Sept. 5th.—Very weak; has no appetite; cannot take the peptonoids on account of the alcohol; still takes the sodium bromide and paregoric.

Sept. 6th.—Feels better to-day.

Sept. 7th and 9th.—Improving.

Sept. 13th.—Is feeling so much better he will be moved into the city in the morning. Operation advised. (Ligation of right carotid and right subclavian).

Sept. 14th.—Moved into the city this morning, distance about five miles. Was bright and cheerful on the way, and stood the trip very well.

Sept. 17th.—Mind wanders much; hands and arms are swollen; face is puffed and cyanosed; condition grave; still refused any operation.

Sept. 18th.—Condition is unchanged; mind wanders; cough very troublesome, and swelling of the arms and hands continues; general condition unchanged.

Sept. 26th.—Condition unchanged.

Sept. 27th.—Died about 4 o'clock P. M., and autopsy made by Dr. D. S. Lamb on the 28th, showed the diagnosis to have been correctly made.

The following is an extract from the *notes of the autopsy* by Dr. Lamb: "Heart small; slight atheroma of aortic and mitral valves. Ascending aorta dilated; aneurismal pouch, 6 x 5 x 5 inches in diameters; projected from the ascending and transverse portions to the right, and forwards and backwards: filled anteriorly two-thirds full with clot. Aorta markedly atheromatous; primary branches

patulous. In the trachea, 1.5 inch above bifurcation, is a shallow ulcer of the anterior and posterior mucous surfaces, where they had been pressed together by the pouch. Portion of right lung adherent to sac. Body much emaciated. Slight bulging forwards of right side of thorax—upper part. Margin of sternum at right second interspace and adjoining cartilages, and soft parts somewhat eroded. Heart as described. Aorta as described; the front of the aneurism corresponded to the eroded sternum; upper level of pouch was four inches above tracheal bifurcation. Right lung compressed; extensive pleuritic adhesions. Kidneys large. Other viscera normal."

Barwell (*Inter. Cyclop. Surgery*, Vol. III, page 375), defines aneurism thus: "Aneurism is a blood-tumor directly communicating with the interior of one or more vessels on the arterial side of the circulation."

Roberts (*Manual of Modern Surgery*, page 263), writes thus: "An aneurism, strictly defined, is a circumscribed dilatation of one or more of the arterial coats, induced by the distending influence of the blood-current upon abnormal vascular walls."

All aneurisms are of one of two classes—tubular or fusiform—and sacculated or sacciform. Any other classification is based upon *post-mortem* appearances, and not upon a possible positive recognition of the condition existing during life. At the same time, some authors of works upon surgery, describe at length classifications of no value clinically, but simply the carefully recorded appearances of the dead-house.

The *tubular or fusiform aneurism* is the expansion or dilatation of the entire periphery of the artery. The *sacculated* form is an expansion of a limited space; in the one, there is a direct passage of blood through the dilatation, while in the other, the blood enters and discharges from the same opening after having passed into the sac.

The *causes* of aneurism are either wound or violence, or a disturbed relation of blood pressure and arterial strength; disease of the arteries, rheumatism, alcoholism, and possibly syphilis symptoms.

The *symptoms* of aneurism need not detain us, as it is the diagnosis which is of more importance.

Diagnosis.—Great care must be exercised in making a *diagnosis*, as there are numerous cases recorded and unrecorded of aneurisms having been incised through mistake. The principal causes of error are pulsatile tumors that are not aneurisms, and aneurisms that are not pulsatile.

An abscess over the course of an artery, or a cyst bound down to the arterial surroundings, or a tumor of any character overlying an artery, will show pulsation, and may lead to the supposition of aneurism. The pulsation is of a different character—simply a rise and fall of the tumor and not of the expansive character of an aneurism, nor is there any murmur; the occlusion of the artery by pressure does not affect its size. An aneurism that does not pulsate, is one where consolidation or diffusion of blood has taken place. The history of the case is always necessary to a correct diagnosis. One of the positive evidences in the case detailed, according to Barwell (op. cit., p. 527), was the effect of pressure on the veins. He states, in considering the symptoms produced by aneurisms of the aortic arch generally: "One of the most important symptoms is produced by pressure on the veins, causing *congestion* of different parts, often a *doughy lump* over one or both clavicles, and *œdema* about the face and arms. The significance of the localities of congestion depends in a great measure upon their relation to other pressure symptoms. Certain combinations furnish remarkably positive evidence. For instance, pressure wholly and entirely on the right bronchus; congestion of both arms and both sides of the head and chest; tumor symptoms, chiefly about the second space and rib, considerably to the right of the sternum; heart displacement, if any, directly outward; the pulses equal, with very slight sphygmographic change, perhaps a rather sloping upstroke, usually a flat, blunt apex, absence partial or total of dicrotic wave, but undulatory character of whole down-line indicate disease of the ascending aorta." * * *

In the *treatment of cases of aortic aneurism*, the medical or constitutional is of paramount importance, even when surgical means are employed. Absolute rest of mind and body must be enforced; excitement of any kind must be avoided; stimulating drinks or food forbidden; decrease in the amount of fluid ingested directed, and iodide of potassium in doses of five grains, rapidly increased to thirty grains three times a day, with separate doses of the bromides to obtain rest and equalization of the circulation. These measures often result in the deposition of laminated fibrine into the sac and a partial cure, but patients become restive under it, and sooner or later violate some of its points to finally abandon it altogether. Surgical interference affords better results, and are comprised under arterial ligation and electrolysis, and the introduction of foreign bodies into the sac, either alone, or combined with the application of electricity, arterial ligation of the left carotid, or a simultaneous ligation of both right subclavian and right carotid. The case presented was one requiring this simultaneous ligation; this being refused, the Loreta-Barwell method was urged. This operation consists in passing a fine silver wire through a trocar into the aneurismal sac, attaching a battery, and gradually increasing the electrolysis for about thirty-minutes, withdrawing the trocar and allowing the wire to remain. Bacilli recommended the introduction of fine watch springs; Loreta the use of fine silver wire, and Barwell the combination of wire and electrolysis.

I regret very much not having looked up the late literature of the treatment by the Loreta-Barwell method, as valuable statistics and intelligent conclusions could have been drawn from such a study.

“The reliability of Warner & Co.’s preparations need never be questioned; they are invariably effective, to the requirements of the medical profession when prescribed.”—J. E. McKEON, M. D., Medford, Mass.

ART. VI.—The Negative Pole of the Galvanic Current with Faradization as a Uterine Developer—With Report of Cases.*

By CHAS. G. CANNADAY, M. D., of Roanoke, Va.

MEMBER AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION; FELLOW OF BRITISH GYNÆCOLOGICAL ASSOCIATION, ETC.

No therapeutic measure to-day offers so sure and complete results in mal-development of the uterus and appendages as electricity scientifically and timely applied.

Faradization may be depended upon to perfect development of the muscular tissue, and for its stimulating effect on the involuntary fibres of the walls of the blood vessels.

The *galvanic current*, if properly applied, produces a determination of blood to the parts, thereby affording pabulum for development of tissue and improving the nutrition. Faradization may be so altered as to produce a sedative effect on the nervous and muscular tissues.

Hence we have in this element, electricity, all the requisites for development, and means by which physiological conditions are almost identically produced and pain relieved. It accomplishes what rest, diet, massage and drugs cannot. Its benefits are permanent, and may be confidently relied upon to produce unfailing results. It is easy of application, giving little or no pain, and is without danger. Its future in gynæcology, I am satisfied, is great from the standpoint as a potent means of developing feeble organs. Its best results are to be obtained in youthful subjects whose tissues are in a plastic state, and especially not in those in whom a mal-development has existed sufficiently long to produce atrophy. This treatment, to be successful, must be frequently applied and extend over a period of months.

No one can question the correctness of the position taken in this article as to uterine development who has ever seriously considered the injurious effects of modern forms of

*Read before the Second Annual Session of the American Electro-Therapeutic Association, in New York City, October, 1892.

female dress, and the mental work required and the limited amount of exercise taken.

The following cases I quote as corroborating my position :

CASE I.—Epilepsy of Developing Puberty—Apparently Cured by Electricity.

Miss E., age 14 years and 9 months, on April 25th was committed to my care. She presented the appearance of health so far as flesh, activity and appearances were concerned; she would laugh with little to induce the same; she was very childish, both as regarding her appearance and her actions; her appetite was very good, and she complained of nothing but epileptic attacks recurring every few days, and growing "more serious," as her mother described it. Her family history was good, no member ever having had hysteria, epilepsy, rheumatism, scrofula or phthisis; her sisters (four) all older than herself, having menstruated at the age of 12 years, and having regular periods throughout.

Her mother gave the history of catamenial periods having occurred at 12 years, and being normal throughout; but this girl had never menstruated at all. About the age of 12 she had her first epileptic convulsion; they came on monthly, and the period between each attack grew shorter. She had consulted two physicians, who, I suppose, had thoroughly exhausted the therapeutics vaunted as beneficial in epilepsy. I made an examination per rectum and with difficulty found a small infantile uterus, and could detect no ovaries. Vaginal examination revealed a uterus with a depth of only one inch. The hair on the pubes was normal. She complained of pain in her bowels at times. I prescribed bromide, bicarbonate and iodide potash in heavy doses with no beneficial results; on the contrary, the attacks seemed to increase both in frequency and severity.

At her first visit I applied vaginal faradization, with external pole over abdomen, followed by galvanism. I soon left off the bromide and iodide of potash, and gave her a tonic of iron. Two or three times a week I applied first the faradic current, one pole over the back of the neck and the other to the right and left vaginal fornices, and intra-uterine, at times using the os uteri electrode. This was usually continued ten minutes, after which I used the galvanic current, using the intra-uterine and vaginal electrode for ten minutes, never going higher than fifteen milliamperes, and using the negative pole as the active one

and the positive pole as the inactive one over the abdomen. After the first month's treatment, this patient's "epileptic fits" began to be less frequent, but continued unabated in severity. I neglected to say, in giving her symptoms, that she was very nervous.

This condition of affairs continued unimproved. The *second* month witnessed a decline in the severity, and the epileptic fits occurred now only every two weeks, but the attacks of "nervousness" continued. The result of the *third* month's treatment witnessed the return of the last attack, which was not very severe, but the nervous attacks continued.

The *fourth* month's treatment is recorded as follows: No convulsions for four weeks; breast enlarging, and looks and acts more like a woman; the ovaries can be detected on each side nearly normal in size; the uterus is at least twice as large as originally in April. The sound enters more than $1\frac{3}{4}$ inches; the uterus looks quite vascular, and while the catamenial periods have not appeared, I confidently expect them soon; the "nervousness" continues, but in a modified form.

September 25th.—Completed the end of the 5th month of treatment. The sound enters $2\frac{1}{4}$ inches, the uterus appears about normal in size; no epileptic convulsions for eight weeks; the uterus looks quite vascular, the mammæ are still developing; she is becoming shy, and evidently will soon have menses occur.

CASE II.—Hysteria of Development Cured by Electrical Treatment.

Sallie O., age 16 years, in 1890 was referred to me by Dr. C. for the treatment of convulsive attacks of hysteria, occurring monthly, and amenorrhœa. This girl gave a family history free from the diatheses; sisters were regular as to catamenia, and healthy since the age of $11\frac{1}{2}$ years. She had persisted in tight lacing, and at the age of 13 she had a short and scanty flow. In the month following, at the time corresponding to this period, her first attack of hysteria came on; she was unconscious, but soon rallied, and in a few days was well. No catamenial period. This condition continued until May, 1890, about two years after her first attack. I examined the uterus, found the cervix about three-quarters of an inch, as I could best judge, and the whole cavity only one and a quarter inch. The ovaries were scarcely to be felt, being so small, but the hair on

pubes was abundant. The mammæ were poorly developed; otherwise she was well and bright. I commenced treatment by applying faradization to the right and left fornices and the external electrode over the abdomen. This was continued each time for fifteen minutes. This was repeated for one month, and much to my surprise, though I gave her anti-spasmodics, the hysterical attacks did not recur. The *second* month I combined the galvanic current with the negative pole active to the interior of the uterus (always succeeding faradization) for the period of ten to fifteen minutes, using fifteen milliamperes. This was repeated twice a week. At the end of the month she had an attack of hysteria, due to excitement I am sure, as the *third* month's treatment was to leave off the anti-spasmodics, and the treatment was the same as the second, except near the time I expected the attack of hysteria; then I gave only the galvanic current daily for fifteen minutes, using only about ten milliamperes. The result was no return of hysteria, notwithstanding she left off the anti-spasmodics. The *fourth* month's treatment showed the mammæ enlarging and the sound entered three inches, and the uterus three days previous to catamenia as expected was very vascular. It was then I ordered warm hip baths. Aloes, myrrh and manganese binocide had been ordered ten days previously, and quiet enjoined; and to my delight the catamenial periods came on, but were so painful as to necessitate the administration of an anodyne for the whole thirty hours the period was on, and twelve hours previous to its appearance. The *fifth* month's treatment was much the same as the fourth, save that the applications were not so frequent. But at the end of this month the pain was mild and the flow continued for two days, but scant. The *sixth* month the application was the same, but only once a week. The catamenia now came on without pain and was free enough as to flow, and its duration was for four days. The *seventh* month the treatment was given only twice, and that gradually diminished in force and duration. The uterus was now two-and-a-half inches in depth and everything appeared normal, and the patient was discharged as cured, and has since had no return of hysteria. She has since married and is now pregnant.

CASE III.—Dysmenorrhœal Hysteria Cured by Electrical Treatment.

Jennie E., age 16 years, has had catamenia regular but scant, and dysmenorrhœa since 13 years of age. Consulted

me in June, 1890, for hysterical attacks before and after catamenia. Examination revealed small os, small uterus and hyperasthetic ovaries, and sound entered only to the depth of one and three-quarter inches. The treatment was faradization, followed by galvanic current, and after *second* month the flow came free and lasted four days. The pain from dysmenorrhœa ceased, and after the *third* month the sound entered two inches, and the hysteria disappeared.

CASE IV.—Dysmenorrhœa and Sterility Cured by Electricity.

The woman had been married for five years. The flow had always been very scant, and duration long and painful, and I am satisfied that this condition of affairs was due to mal-development, for the sound entered only one-and-a-half inch, and the uterus was small. She was married at 20; at 25 had never been pregnant. The treatment was faradization until five days prior to expected catamenial period, when I gave her three negative intra-uterine applications, lasting five minutes, of thirty milliamperes. The flow was slightly improved in quantity. The second month was about the same, and flow improved in quantity and pain disappeared. The third month the uterus was increased in size and the pain less, the duration normal, and after the fourth month, the sound entered two-and-a quarter inches, and everything appeared normal. The treatment was stopped, and after two months the flow stopped and she consulted me again. I suspected pregnancy, and advised her to return in two months. She did so, and I found her pregnant, and afterwards delivered her of a healthy child.

Cases 6, 7 and 3 are cases of dysmenorrhœa occurring in girls ranging from fifteen to twenty years of age, in which the dimensions of the uterus was in all cases below normal, and in which drugs had been used with only temporary relief. In such instances faradization, followed by the negative pole of the galvanic current, relieved the patients permanently, and restored the dimensions of the uterus.

This much of experience has led me to believe, 1st, that mal-development is more frequent than is supposed. 2d. That it is responsible for a large per cent. of female diseases. 3d. That a great many reflex symptoms are due to mal-development not generally attributed to this cause. 4th. That faradization, followed by galvanic currents, is the most reliable means we have of developing the uterus.

ART. VII.—Dysentery—Its Prevalence and Treatment.*

By L. ASHTON, M. D., of Dallas, Texas,

MEMBER OF AMERICAN MEDICAL ASSOCIATION, HONORARY MEMBER MEDICAL SOCIETY OF VIRGINIA, EX-MEMBER MEDICAL EXAMINING BOARD OF VIRGINIA, MEMBER OF TEXAS STATE MEDICAL ASSOCIATION, ETC.

Acute dysentery, because of its frequency, painfulness, and fatality, has occupied a large share of the attention of medical men since the days of Hippocrates. For my purpose, I will embrace under the designation all the various forms of acute alvine fluxes in which tenesmus is a prominent symptom. Tenesmus arises whenever the inflammation of the mucous membrane, upon which the flux depends, affects the descending colon and rectum with sufficient intensity to make the expulsive efforts painful.

Dysentery is one of the four great epidemic diseases of the world, and, in the tropics, destroys more people than cholera. Its fatality in the Union Army in the Chickahominy swamps during McClellan's campaign, according to Woodward, was more fatal than all other diseases put together. While especially severe in the tropics, sporadic cases constantly appear in more temperate climates. Under favoring conditions, epidemics occur in Northern countries, such as Russia and Canada. In the Southern cities of this country, dysentery is very common even when not epidemic. Perhaps the most severe epidemics of dysentery in the United States prevailed in various localities from 1848 to 1856. During the late Civil War, the disease prevailed to an alarming extent in both the Union and Confederate Armies.

The Census Reports since 1870 show a progressive decrease in the number of deaths from this disease. According to all observers since the days of Hippocrates, it prevails most extensively in the summer and autumn. It is well-established of dysentery that it occurs, for the most part, in the hottest season of the year. Of 546 epidemics

* Read before the North Texas Medical Association, December 13th, 1892.

tabulated by Hirsch, 404 occurred in summer and fall, 113 in fall and winter, 16 in spring and summer, and only 13 in winter. Fourteen-fifteenths of the whole number of epidemics occurred in the months of June to November inclusive, and it is corroborative of this conclusion that of 1,500 deaths from dysentery in the cities of Boston, New York, Philadelphia, and Baltimore, in eleven years, 1,400 occurred in the months of July, August, and September. The Census Report 1870-80 of our country shows the maximum mortality in August and September, and the minimum in January and February. Sudden changes of temperature appear more harmful than variations in moisture.

The prevalence of unusual heat may call out an endemic in places where the disease usually shows itself in epidemic or sporadic form, as evidenced by the severe epidemic of 1540, which appeared in England, which was produced by a heat so intense as to dry up the small streams and wells, in consequence of which many cattle died of thirst.

That dysenteric affections are more frequent in malarial localities, has long been known, and is probably connected with external conditions favoring their development. With reference to drinking water, there can be no doubt that the effects of dissolved mineral matters play an important part, and dysentery is always prevalent in districts where wells are low. From the days of the Greek physicians, it has been held that the impurities in the stagnant water of marshes and ponds may give rise to diarrhœa and dysentery. It is probably not the vegetable impurities which are directly causative, but the organic matter contained therein.

To sum up the *etiology of dysentery* in a few words, it may be said that few chapters in medicine are so thoroughly unsatisfactory. The prospect of reconciling the accumulated discordant facts is very discouraging, because of the singular uniformity in the symptoms, and because the temptation is strong to look for a common cause and to ascribe all cases to this cause, explaining differences by degree rather than

by kind. Such a view found solid support in the assumption of a specific germ. The amœba coli, discovered by Losch, or the amœba dysenteria of Councilman and Lafleur, also reported by our own Dr. Dock, formerly of Galveston, now of Ann Arbor, Mich., and Musser, of Philadelphia, would ally dysentery with typhoid fever, a disease which has likewise, in all cases, uniform symptoms, and lesions, and which prevail in both sporadic and epidemic form.

That this is one of the chief causes of dysentery cannot now be denied, nor does the adoption of this view exclude the possibility of producing catarrhal cases by many kinds of noxious germs, including those of common putrefaction. Hot air and wet air are notorious bearers and breeders of germs, and by the law of gravity keep them near the surface of the earth—conditions which coincide with the prevalence of the disease in the tropics, and among individuals who sleep in the open air on the ground.

In the past two years there have been so many descriptions of the amœba, with reports of cases, that I do not deem it necessary to occupy more of your time in its description, and will pass over that part of it which is so familiar to you all—the morbid anatomy—and come to the *treatment of this grave affliction*.

Treatment.—That there are slight grades of dysentery and that the systems of many are able to throw off this disease in the sporadic form, there can be no doubt, as shown by Flint, where he states, as he does, that it is a self-limited disease, which runs its course in from eight to ten days. When called to a case early, it should be the duty of the medical attendant to see that his patient is placed in the position of most thorough quiet, and one conducive to rest of body and mind. A saline purge should be given, as the free, watery evacuation produced by a dose of salts, cleanse the large bowels with the least possible irritation; if necessary in the course of the disease, the dose may be repeated. Other purgatives, as a rule, are to be avoided.

The important thing to do is to early render the bowels as thoroughly aseptic as possible. The question is, How is

this to be accomplished and still not injure the patient? How to destroy the germs that have already lodged in the mucous membrane and produced ulcers, or perhaps necrosis? In my hands this is best done by salicin, salol, sodium salicylate, or the peroxide of hydrogen, given in the form of glycozone in teas, powerful doses, often repeated; because of the ozone in this preparation, it commends itself especially to my judgment. It should be administered in a wineglass of water. It is entirely harmless.

Salol with bismuth, or salicylate of bismuth, have often rendered me good service. Opium is an invaluable remedy for the relief of the pain and to quiet the peristalsis. It should be given as morphine, hypodermically, according to the needs of the case.

The treatment of dysentery by topical application, is by far the most rational plan. A suppository of cocaine and belladonna should always precede the irrigation of the colon, as thereby the irritation of the anus and rectum is overcome, and the tenesmus greatly lessened. Then, with a long tube, the solution selected can be allowed to flow slowly, and thoroughly distend the gut, which should hold from four to six imperial pints. The patient should be in the dorsal position, with the hips raised high enough to get the effect of gravity.

It should be borne in mind that enemata can be made to pass through the ilio-cæcal valve, and that with patience and care we can apply our antiseptic, or sedative, to every portion of the large bowel. Dr. Edward Ricketts, of Cincinnati, has recently, before the Medical Society of Virginia, (*Va. Med. Monthly*, October, 1892), described a tube for rectal alimentation which will be of great service in either rectal or colon feeding, or for irrigating the bowels. I have generally used a large rectal tube or catheter, inserting it from eight to twelve inches. The irrigating injection should be a larger one, which will reach all parts of the colon. This plan which was adopted by Hare, of Edinburgh, is highly recommended by H. C. Wood and others.

In this section of the country, I find that an injection of quinine in the early stages is more potent than any other, because of its well known destructive powers of the amœba whenever it comes in contact with it; and secondly, by absorption from the bowel, its specific effects in all cases complicated by malaria are as well obtained as though administered by the mouth. To begin, it is well not to use more than two or three pints of the quinine solution, and to have this warm and to allow it to run in slowly. The strength of the solution should be one to one thousand or one to five hundred. Sodium salicylate injections are also useful in the strength of 2 to 4 per cent., and peroxide of hydrogen in from 10 to 25 per cent. solution.

After the acute symptoms subside, various astringent injections may be used, and appear to do good, such as nitrate of silver, copper, zinc, and alum. Of these, my preference is for alum in the proportion of a teaspoonful to a pint of hot or cold water. I have rarely seen good results from the nitrate of silver, except in the chronic stage; if it is ever used, it should be from twenty to thirty grains to the pint of water, and from four to six pints at a time, to insure its reaching all parts of the colon.

The diet should not be overlooked, and should consist of milk, whey, and broths; and the greatest care should be taken to provide only the most digestible articles of food. Egg albumen and beef juice frequently agree with some, when milk by its undigested curds pass into the bowel and irritate them.

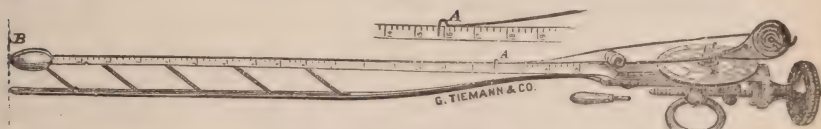
Creosote in Tracheotomy.

Dr. Soupault reports, in the *Rev. des Mal de l' Enfant*, favorably upon the internal use of creosote in full doses after tracheotomy, and attributes the excellent showing of four to six per cent. of recoveries to its use. The drug is also to be applied externally over the tube in a one to thirty solution in alcohol and glycerine.

ART. VIII.—An Improved Urethrotome.

By GEORGE CORRIE, M. D., of Blossom Hill, Princess Anne Co., Va.

About a year ago I had Messrs. Tiemann & Co. make for me the urethrotome pictured below. The instrument has given me such satisfaction, and been so much admired by those who have seen it, that I venture to offer it to the profession.



This is essentially the admirable dilating urethrotome designed by Dr. F. N. Otis, having the rack-and-pinion attachment suggested by Dr. J. A. Wyeth, and the following additions of my own:

1. A bulb at the distal end of the upper bar of the shaft, which sheathes the knife, and which locates the tissue to be cut, avoiding the annoyance and uncertainty of having to take measurements.

2. The under or dilating bar has been extended to reach the line B when the instrument is working at about its medium capacity. [This lower bar ended at its junction with the last bracket when the instrument was first made; but I found, in cutting very narrow annular strictures, that an incline occurred just where it gave the bulb a tendency to slip forward; so I had the instrument remodeled in this particular.]

3. The upper or main bar of the shaft is marked in millimetres, the bulb being zero. A small wire is caught in the eye in the centre of the thumb-grip, passed under the pinion-handle, close to the shaft, and bent over the scale at the 16-centimetre mark. This little indicator shows accurately the movements of the blade.

Having predetermined the existence of stricture, the surgeon can, with this urethrotome, (a) locate the point of operation, (b) decide upon the width or extent of the morbid

tissue, (c) cut with the utmost precision, and (d) make sure that the division has been complete.

The urethrotome, as now made, is adapted to strictures having calibres ranging from 24 to 45 French scale; though these limits can be changed in the making up of a new instrument.

I must not neglect to thank the instrument-makers for their patience in catering to my whims, and for the beautiful instrument sent me.

Clinical Reports.

Comminuted Fracture of the Skull—Trephining—Perfect Recovery.

By RAMON D GARCIN, M. D., of Richmond, Va.,

ADJUNCT PROFESSOR PRACTICE OF MEDICINE, MEDICAL COLLEGE OF VIRGINIA, MEMBER
RICHMOND (VA.) BOARD OF HEALTH, ETC.

Sunday night, *August 14th*, I was hurriedly summoned to a little boy five years of age, named Frank Hall, who had been accidentally run over by a hack. I found the injury to be a fracture of the left side of the skull, commencing a half inch posterior to the external angular process of the frontal bone, extending upward and backward for a distance of four inches, nearly corresponding to the upper part of the squamo-parietal suture. One portion of bone was driven under the other, causing considerable depression and exposure of cerebral substance. Moderate hæmorrhage took place, but was chiefly venous and was easily controlled. The boy was unconscious; respiration rather slow and labored; pulse, slow and full.

Taking into consideration the gravity of the child's condition, and desiring additional advice and assistance before operating, my friends, Drs. M. L. James, J. P. Harrison, and R. T. Ellis, kindly aided me. The unanimous decision of all was to raise the depressed bone at once. Under chloroform, this was attempted with the depressor, but failure resulted, the bone being too firmly driven under the upper portion. So, with the aid of the gentlemen mentioned, trephining was resorted to. Although the child became very feeble under the operation, most of the depressed bone was

removed, as were also several spiculæ of bone. Fearing that our patient might die under anæsthesia, as his condition was decidedly critical just then, further operative procedures were postponed till re-action should take place to some extent—a condition that none of us expected to see.

The wound was dressed antiseptically; a calming draught of bromide of potassium and chloral was ordered; a few general directions given, and we retired.

Monday, August 15, 6 A. M.—Patient's temperature (axillary), $100\frac{1}{2}^{\circ}\text{F.}$; slept quite well since one o'clock A. M., as a result of the prescriptions given.

11 A. M.—Temperature, 100°F. (axillary); patient conscious, and with as little marked development of inflammatory or other trouble as could be expected in one with the amount of injury he had sustained. He had taken a glass of milk in the interim.

The parents decidedly objected to further operative procedures, unless I should give a very favorable prognosis; and although my friends, as well as I, set forth in the strongest terms the great folly of their course, they were obstinate, and nothing further could be done.

My prognosis, under these circumstances, was decidedly grave.

August 16.—Temperature normal; patient entirely conscious, and takes a sufficient quantity of nourishment; rests quite well at night. The wound was dressed antiseptically.

August 17–23 inclusive.—Patient seen daily or twice daily, as necessary. Progressing exceedingly well, in spite of the unfavorable prognosis.

August 24–September 5 inclusive.—The same general conditions present; there have been neither meningitis nor any other symptoms which could be classed as unfavorable; the patient has been up and walking about for the past two days, and a strict watch was necessary to keep him from running on the porch.

From this date (*September 5*) onward, the boy's progress was uninterrupted. The wound healed with the formation of a very slight quantity of pus, considering its location and extent; consciousness has not been impaired at all; he is the same wild, laughing Frank as of yore, and at this writing (*December*) only the scar remains.

Remarks.—Several features of this case are worthy of note.

(1) The absence of cerebral complications, particularly inflammation of the meninges.

(2) As a consequence of the absence of such complications, there was no fever at all, or so little as not to be considered.

(3) The prompt return of *strength and consciousness*.

2318 East Broad Street.

Proceedings of Societies, Boards, etc.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

[We regret that we had to go to press with the December number, 1892, before receiving all the reports of the session held in Louisville, Ky., November 15-17. In that issue we published papers and synopses of papers by Drs. Joseph Taber Johnson, George Ross, Wm. D. Haggard, Henry C. Coe, W. C. Dugan, H. Horace Grant, J. D. S. Davis, Henry O. Marcy, Wm. Warren Potter, Bedford Brown, A. Morgan Cartledge, and Wm. Perrin Nicolson.

The *Officers-elect* are Dr. Bedford Brown, Alexandria, Va., *President*; Drs. Joseph Price, Philadelphia, Pa., and G. A. Baxter, Chattanooga, Tenn., *Vice-Presidents*; Dr. W. E. B. Davis, Birmingham, Ala., *Secretary*; and Dr. Hardin P. Cochrane, of Birmingham, Ala., *Treasurer*. Meets second Tuesday in November, 1893, in New Orleans, La. Dr. Albert B. Miles, Chairman of Local Committee.

We now append, as a part of the Report of the Session in Louisville, the following synopses, etc., of papers there presented:]

Experiences in Pelvic Surgery.

In the paper by Dr. A. V. L. Brokaw, of St. Louis, Mo., he said that of all the surgical problems difficult to solve, those met with in the pelvis are the most trying; a diversity of conditions, complications, and unexpected happenings, are ever presenting. In a series of many operations, but few will be alike in every particular. As his experience becomes larger, he is free to confess his inability to correctly diagnose the character of abdominal and pelvic troubles. He had diagnosed pus tubes, and found extra-

uterine pregnancy; diagnosed extra-uterine pregnancy and found pus; diagnosed ovarian lesions and found the trouble located in the tubes, and *vice versa*. When well-defined pelvic lesions exist, nothing short of radical measures succeed. The one condition, above all others, where exploratory incision should be adopted, is in cases of suspected extra-uterine pregnancy. It was correct and good surgery to open the abdomen, and not wait for all the classical signs to appear. The symptoms of extra-uterine pregnancy were so frequently obscure and unreliable that he was firmly convinced a radical position should be taken. A case was cited in point.

Dr. Wm. Warren Potter, of Buffalo, endorsed that portion of the paper pertaining to an early exploratory incision in cases of suspected extra-uterine pregnancy. As regards the use of the sound, he had brought an indictment against it some six or eight years ago; consequently, he would not now expatiate upon it.

Dr. Joseph Taber Johnson, of Washington, said that as soon as the surgeon diagnoses something in the abdominal cavity that ought not to be there, anatomically or physiologically, and was histologically wrong, it should be removed. An exploratory operation was justifiable in cases of suspected extra-uterine pregnancy, and the surgeon should base his further procedures upon what he finds after making the exploration.

Dr. W. E. B. Davis, of Birmingham, Ala., thought the pendulum relative to surgical interference had swung a little too far. He believed a great many of the so-called "tinkerers," who succeeded in relieving their patients, did not accomplish it so much by the local treatment they used as by having patients under their care, keeping the bowels open, giving constitutional treatment, seeing them regularly, etc. While by so doing they might not be cured, they were frequently greatly benefitted. Regarding the diagnosis, surgeons who were opening the abdomen constantly would rarely give a positive diagnosis in the case. Dr. Davis cited the case of a woman who had an acute attack of peritonitis with a small cyst, and the history was the same as from pelvic abscess.

Dr. Brokaw, in closing the discussion, said that in every case of suspected extra-uterine pregnancy it was good surgery to make an exploratory incision and operate before rupture took place.

Dr. Cornelius Kollock, of Cheraw, S. C., read a paper on

Craniotomy Upon the Living Fœtus is Not Justifiable.

He said this operation implied the death of the fœtus and a fearful mutilation of its body, often accompanied by serious lacerations of the vagina and adjacent tissues of the mother. Recent advances in obstetrics, gynæcology, and abdominal surgery, contribute largely to a demonstration of the fact that a timely resort to a Cæsarean section in pelvic obstruction is the great factor to success. In Germany, out of 149 cases of contracted pelvis, 109 mothers and 136 children were saved. If craniotomy had been done in those cases, 149 children would have been destroyed, and probably fifty women—perhaps more—making a sacrifice of at least 199 lives. In many of these cases, exhaustion had supervened and septic influences had already been excited. This, added to a tardy disposition to union by first intention, caused by contusion of the parts involved in the uterine incision, lessened materially the woman's chances for recovery. Zweifel was successful in 29 cases out of 30; Schauta did Cæsarean section 15 times without a single death. Recently, in 18 operations done in Louisiana, 14 were successful. Of eight in Ohio, six were successful. Dr. Price has done Cæsarean section a number of times successfully. Dr. Kollock is firmly convinced that 85 or 90 per cent. of the cases of obstruction of the pelvis forbidding the delivery of the fœtus in the natural way might be saved by a timely resort to Cæsarean section.

Dr. W. D. Haggard, of Nashville, emphasized the position taken by Dr. Kollock. He believes that when the profession fully realizes the immense difference in the number of lives saved by Cæsarean section over craniotomy, there will be no doubt as to its preference to the latter operation.

Dr. Hunter McGuire, of Richmond, favored Cæsarean section. Some time ago, he saw the report of a case by Dr. Thomas, of New York, where, in doing Cæsarean section, he proposed to take the uterus out of the cavity and then open it. He thought such a procedure would add very much to the danger of the operation, necessitating a larger opening, exposing the cavity of the abdomen a long time to the atmosphere, etc. He does not favor this procedure.

Dr. L. S. McMurtry, of Louisville, said that a few years ago it would have been impossible for one to have presented the views that Dr. Kollock had without meeting with violent opposition. Cæsarean section was then regarded as an extremely heroic operation, and until recent years the

mortality therefrom was very great; but since it has been carried to the present degree of perfection by Sænger and others, it has strengthened the opinions of abdominal surgeons who now consider it preferable to craniotomy. Within the last two months symphysiotomy had been brought before the profession and practiced as an alternative in certain cases for Cæsarean section. What the future of the former operation is to be, we are not prepared to say.

Dr. Arch. Dixon, of Henderson, Ky., advised Cæsarean section in a case in which he was called in consultation, but the family physician insisted upon his doing craniotomy, which was done; and while every precaution was taken with regard to rendering aseptic the field of operation, the woman developed pelvic peritonitis, and died within four days. He believed a Porro operation would have saved the life of the woman, and perhaps that of the child.

Dr. S. M. Hogan, of Union Springs, Ala., reported a

Case of Fibroid Tumor of the Uterus—Pregnancy—Rupture about the Fourth Month—Operation—Specimen.

Colored woman, age 28. From the symptoms and history of the case, he was satisfied there was a rupture probably about the fourth month of gestation. He was also of opinion that the rupture did not immediately destroy the fœtus; that it continued to grow in its abnormal position. He felt sure that if he had operated immediately after rupture the patient's life would have been saved. In all cases of rupture, he would advise Porro's operation to be done immediately; in all cases, where the tumor is large or multiple, intra-mural, or sub-peritoneal, with a sacciform dilatation of the posterior segment of the uterus, and the os above the pubic bone, or inaccessible, the same operation should be done. In all cases where the tumor is in front of the child, or blocking the passage, it should be done—provided the pregnancy has advanced to the full time, or if there should be a hæmorrhage, or rupture of the membrane, indicating that an abortion or miscarriage is imminent.

New Operation for the Radical Cure of Inguinal Hernia.

Dr. George A. Baxter, of Chattanooga, Tenn., presented a radically different operation in principle from any yet given. It consists in a prolongation of the incision, after the ordinary management of the sac, and after ligating, through the internal ring, into a more or less extensive laparotomy, as the exigencies or the case demand; lifting the neck of

the sac into the abdominal opening above the ring, and its fixation there by a deep suturing, cutting off the sac close above the peritoneum and its closure by buried suture, and a final closure of the abdominal opening by this and a more superficial set of sutures, which pass across above the closed sac and peritoneum and underneath the deep fasciæ, which are intended to approximate the homologous tissues of the abdominal wall. The ring is closed with crucial sutures, dipping over cord and traversing the tissues, and the seminal canal closed with deep suturing alone.

The points of originality claimed are: A line of incision suitable for any inguinal hernia, and by the fixation of the sac above the peritoneum, a deflection of all abdominal expulsive force from the ring and canal, and the thickened lining of the internal ring, and the method of closure of abdominal incision. Advantages claimed: Quick cure, with avoidance of necessity of a truss; deflection of expulsive force from the internal opening and canal to the abdominal parietes; advantage in being able to approach constriction, either from without or within; avoidance of necessity for traction on sac or contents; ample room for treatment in diseased conditions of sac or contents, including gut operation if necessary.

Dr. W. H. Wathen, of Louisville, read a paper entitled

The Treatment of Umbilical and Ventral Hernia.

The importance of studying carefully the best methods of treating hernia is now especially emphasized because of the increased frequency of the disease following laparotomy, and especially because the modern methods of surgery make the operation far less dangerous than it formerly was. The operation for radical cure of hernia in the practice of the best surgeons, except in extreme cases, is practically devoid of danger, and the result may be made permanent. Modern antiseptic and aseptic precautions have practically excluded the danger which formerly arose from infective peritonitis.

Many cases of ventral hernia could have been prevented had the proper treatment been carried out in the closure of the abdominal wound. In order that there may be no hernia following laparotomy, it is necessary to get perfect union by adhesions of all the layers of tissue forming the abdominal wall—the peritoneum, muscles, the deep and superficial fascia, and the skin; but especially must we get union of the layers of fascia; for unless this be done, the other layers will gradually separate and hernia will follow. This cannot be

done unless we succeed in bringing the cut edges of the fascia in even and perfect apposition long enough for strong union to occur.

Treatment of Ununited Fractures by Resection.

Dr. W. O. Roberts, of Louisville, said the treatment of ununited fractures by resection is more than a hundred years old—White, of Manchester, having done the first operation in 1760. In consequence of the great mortality attending the operation, it was abandoned until revived by Sir Benjamin Brodie. In 1805, Horeau, after having divided the fragments obliquely, fastened them together by tying a metallic wire around them. Rogers, of New York, in 1838, passed the wire through holes drilled in the wall of the fragment and then twisted it. Since then other surgeons have used sutures of various materials in the same way—some of them leaving the sutures in permanently, while others removed them after union of the fragment had occurred. Some, instead of drilling the bone, passed the sutures simply through the periosteum. Screws, nails, ivory pegs, and clamps, have been used for the same purpose. In the long bones, when coaptation of the fragments can be secured, Dr. Roberts feels satisfied that resection and a fixed dressing will be followed by just as good results as when sutures or other contrivances for fastening the ends of the fragments together are used.

Symptoms of Fracture—Their Importance and Significance.

Dr. W. C. Dugan, of Louisville, read a paper on this subject.

Dr. Bedford Brown, of Alexandria, Va., related the case of a boy who sustained a compound comminuted fracture of the skull in 1880, yet he was perfectly conscious and had no symptoms of compression of the brain. The spiculæ of bone were removed and recovery followed.

Dr. J. H. Letcher, of Henderson, Ky., advised against the too hasty resort to the use of trephine and chisel in injuries of the skull.

Dr. C. Kollock, of Cheraw, S. C., had trephined in two cases with successful results.

Dr. J. H. McIntyre, of St. Louis, reported a case of traumatic insanity in a railroad employé, in which he trephined with success. The fracture was an extensive one and occurred in the upper Rolandic region. He reported several other interesting cases.

Dr. William Warren Potter, of Buffalo, called attention

to fracture of the internal table of the skull without fracture of the external; hence the great liability to error in diagnosis.

Dr. Howard A. Kelly, of Baltimore, related the case of a man who fell and was brought to the Presbyterian Hospital in a comatose state. Careful examination revealed the fact that the man had diabetic cataract with fracture at the base of the skull.

Dr. William T. Briggs, of Nashville, had trephined in 50 cases of epilepsy. Four-fifths of the cases operated on were relieved temporarily, but not permanently.

Dr. T. A. Reamy, of Cincinnati, mentioned the case of a man who had fallen from the second story of a courthouse, sustaining a fracture of the skull, but had never had epilepsy or any bad symptom following the injury. He thought this case would be some comfort to the country practitioner who did not enlarge the scalp wound in all cases.

The papers were further discussed by Drs. Vance, Lydston, Nicolson, Greenly, and Baxter, all of them favoring radical measures in the treatment of injuries of the skull.

Intestinal Anastomosis by a New Device.

In this paper by Dr. H. Horace Grant, Professor of Surgery Hospital College Medicine, of Louisville, Ky., reference was made to Abbé's suggestion of direct suture without plates of any kind, and to the necessity for a longer cut in the gut to avoid closure of the opening by a cicatricial contraction. It was insisted that direct suture was a tedious step, and could not be safely undertaken by the general surgeon, not previously trained in such work, with any expectation of completion in considerably over an hour, which was a dangerous expenditure of time. To secure opening enough, and to guard against too great contraction, an elliptical anastomotic opening should be made, two inches long and one-fourth inch in transverse diameter. The opening may be then approximated by the plates of raw-hide, as now used and understood. Plates long enough to approximate four-inch incisions, as suggested by Abbé, would be unsafe, and almost unmanageable. To facilitate direct closure without any plates, a scissors cutting clamp was shown. The two blades are oval, the opening two and a quarter inches wide. A shoulder one-eighth of an inch wide surrounds each blade. The arms of the blade allow full five inches introduction into the bowel, thus leaving one and a

quarter to two inches of free ends for invagination. After the resection, the divided ends are held parallel, and the blade passed into each and the clamp tightened. Now the two surfaces thus approximated are rapidly stitched together around the clamp by a continuous over-hand Lembert suture of fine silk. The suture is interrupted and tied every inch or so to insure approximation. Two rows of suture may be employed if it seems desirable. The work can be done far more rapidly than without the clamp. The clamp is now again tightened, if need be, and a long pair of dressing forceps passed into the bowel, and the plug removed or pushed in. The scissors action of the clamp and the pressure prevent all hæmorrhage. The clamp is now withdrawn, and ends invaginated in the usual way. This instrument can be used only after resection. It was the writer's belief that the oval opening, with two-inch plates, would offer the safest plan in anastomosis without resection, and that the clamp would be of great service after resection.

Dr. A. V. L. Brokaw, of St. Louis, thought the instrument exhibited by Dr. Grant a good one, and said that anything which materially assists the surgeon in making intestinal anastomotic operations rapidly, was of great value—that time was a most important element. The use of rings, plates and mats in the past was bad. He believes we can suture far more rapidly with Dr. Grant's instrument than with any other device he has thus far seen.

Dr. W. E. B. Davis, of Birmingham, Ala., believed a large number of operators had abolished mechanical devices in doing intestinal anastomosis. His brother (Dr. John D. S. Davis), had devised a cat-gut plate and mat, but now prefers not to use the plate. In the case of resection of the bowel, he thought the device of Dr. Grant was an ingenious one, inasmuch as it would facilitate the work of the surgeon and enable him to do an operation very quickly. He had conducted a series of experiments in an effort to do away with mechanical devices, by which surgeons might use the end-to-end operation by splitting up the bowel. While the operation was successful in some cases, the strain on the circulation was too great, and he now condemns the operation.

Dr. G. Frank Lydston, of Chicago, directed attention to Dr. J. B. Murphy's anastomosis button, a recent device, by which he says cholecysto-enterostomies can be done in from eight to twelve minutes.

Dr. Ap. Morgan Vance, of Louisville, read a paper entitled

A Plea for More Rapid Surgical Work,

In which he said a great number of surgeons pay little attention to the time consumed in an operation, or to the nicety of manipulation and dexterous use of instruments that our forefathers prided themselves on. He had seen on numerous occasions the work of our most distinguished surgeons, and had seen deaths occur from prolonged anaesthesia, and too much time consumed in operations which would not have taken place if much unnecessary time had not been wasted. The habit of starting the anaesthetic before all preparations were completed was very reprehensible.

Drs. Arch Dixon, Rufus B. Hall, George A. Baxter, and Edwin Ricketts, all endorsed the position taken by the essayist.

Dr. Charles A. L. Reed, of Cincinnati, contributed a paper entitled

Surgery of the Ureters—with a Report of Cases.

He said that surgery of the ureter is one of the developmental subjects of abdominal surgery. The out-of-the-way conduits exercising functions that are vital in character, are liable to diseased conditions which baffle the resources of the diagnostician and tax the ingenuity of the operator. For purposes of diagnosis, the physical means at our disposal may be briefly summarized as follows: (1) Exploration of the lower end of the ureter by digital examination—(a) through the vagina, (b) rectum, and (c) through the bladder; (2) exploration of the lower end of the ureters by the sound passed through the urethra and bladder into the ureters; (3) exploration of the central portion of the ureters by abdominal lumbar palpation—an expedient of practical value only in cases of extreme urethral distention occurring in very thin subjects; (4) exploration of the upper end of the ureters by exploratory nephrotomy. Each of these several expedients might be amplified, but it would be uncalled for in the presence of such distinguished members. Dr. Reed said that since catheterization of the ureters has been popularized in this country—chiefly through Kelly—and since the technique of the procedure has become understood by those who have studied it, the diagnosis of disease within and surrounding these tubes is vastly more common. The digital exploration through the urethra and

bladder, is an easy expedient so far as the surgeon is concerned, and often leads to the elucidation of important pathological facts; but the speaker is forced to believe that it is not without danger to the patient. He has been forced into this belief by one case of incontinence lasting for nearly a year, and by two cases of weakened power of retention, one of which is now of quite two years' standing. Dr. Reed said that abdominal section for diagnosis of urethral conditions, notably in cases of suspected calculus, is entirely justifiable. He then reported a case of peri-ureteritis; kolpo-cysto-ureterotomy, with recovery. The second case was one of cicatricial stricture of an excised ureter; hydronephrosis, nephrectomy, remaining urethral disease.

Dr. R. M. Cunningham, of Birmingham, Ala., read a paper entitled

The General Practitioner as a Gynæcologist.

The general practitioner should not undertake work that can be better and more safely done by the specialist, provided one is obtainable. He should be willing to do and attempt the most radical and dangerous operations when necessary to save life, provided a specialist or one better prepared to do the work cannot be obtained. In cases not necessarily dangerous, or in which life does not become more or less a burden, but in which a cure can be effected only by a radical procedure, but which may be materially benefitted, or symptomatically relieved by milder methods, he should adopt the latter and not the former. In many cases the field is clearly his own, belongs to him, and he should be prepared and competent to treat them with safety and success.

Specialism in Medicine.—Dr. W. F. Westmoreland, of Atlanta, said there were two kinds of specialists—one with his preconceived ideas, which become warped, who always suffers from astigmatism, etc., who is a graduate of his kind. The other kind was the man who has worked his way by his generally acknowledged ability in any particular line.

Dr. Howard A. Kelly, of Baltimore, read a paper entitled;

A Preliminary Report of the Morphology of Ovarian and Myomatous Tumors.

The speaker said the form of abdomen characteristic of large ovarian cysts is a globular or ovoid distension of a part or the whole of the abdominal wall, pushing out the infra-umbilical portion much more than the supra-umbili-

cal—at least so long as the tumor occupies the lower half or two-thirds of the abdomen. This enlargement is uniform in parovarian cysts and polycystic tumors, exhibiting but few bosses, due to the fact that the latter are composed of one or two large cysts associated with a mass of smaller ones; and the large cyst is best accommodated in the median line in the distended concave anterior abdominal wall, while the smaller ones at the side or back consequently do not show. Prominent exceptions to the general rule just enunciated—that pelvic tumors distend most markedly the inferior abdominal zone—are the notable stretching of the upper abdomen in very fat women with large ovarian tumors, and the like distention in rachitic dwarfs in advanced pregnancy. Nodular myomata on the other hand stand out in marked contrast to the smooth outlines of cystic tumors in giving to the lower abdomen a lumpy bossed appearance, thus exhibiting through muscles and skin a softened exaggeration of their irregular outlines. This peculiarity still remains prominent, although softened, after these tumors have undergone fibro-cystic degeneration. Cystic tumors filling the pelvis and part of the abdomen are but rarely found to originate in some upper abdominal tumor. The speaker presented for demonstration a photograph of an enormous kidney, containing over a gallon of pus, extending from the pelvic floor up through the abdomen and pushing up the left ribs.

Dr. William H. Myers, of Fort Wayne, Ind., read a paper on

The Treatment of Tubercular Peritonitis.

When we have arrived at the conclusion that peritonitis is present, and have discovered the cause, the blow must be struck simultaneously with the onset. No delay can safely be tolerated—the only hope of rescue being the sudden arrest of the disease. By the time that the normal outlines of the abdomen are obscured by tympanitic distention, respiration quickened and shallow, the pulse rapid and wiry, the supreme moment for precise diagnosis is passed. Abdominal section for tubercular peritonitis is the most recent triumph in surgery. Dr. Myers had treated three cases of tubercular peritonitis by abdominal section, washing out the abdominal cavity and drainage, with complete recovery.

Dr. G. Frank Lydston, of Chicago, read a paper entitled

Bacteriological Research in its Relation to the Surgery of the Genito-Urinary Organs.

The author said that, in his opinion, modern bacteriological and pathological research has nowhere been more productive of scientific and practical progress than in the special field of genito-urinary surgery. He would not attempt to decide the question as to whether, under certain circumstances, the microbial organisms, which are constantly to be found in the secretions of the genito-urinary tract, are causal factors in pathogenesis of various forms; or, on the other hand, to decide the precise relation of hetero-genetic organisms to the same morbid processes. The relation between what may be termed the normal germ and germs of non-pathogenic properties must certainly be left to the practical microbiologist. We are warranted, however, in drawing certain inferences and making certain practical deductions from what we know of the evolutionary laws of progression, differentiation and adaptation to environment. Many of the divers forms of disease of microbial origin were doubtless embraced under the omnibus term of urinary infection. The present state of our knowledge does not admit of arbitrary differentiation between them. It is sufficient to say that many forms of organic and functional change affecting the genito-urinary tract are of microbial origin. These processes range in severity from a general infection with effusion and perhaps suppuration in joint cavities to so simple a local lesion as a chronic prostatic irritation. The author quoted the researches of such modern authors as Reginald Harrison, Halle, Rovsing, Krogius, Bumm, Albarran, and Guyon.

Dr. James Evans, Florence, S. C., contributed a paper on **Shock.**

In the severe injuries inflicted on the body by accident, and in the major operations of surgery, not the least element of danger to life is the condition known as shock, which rapidly supervenes. The degree of shock is not determined solely by the extent and gravity of the physical injury. Certain idiosyncrasies of constitution, the character of the force which inflicted the injury, and the circumstances under which it occurred, are potent factors in its determination. Individuals of a highly wrought and exquisitely nervous organization bear pain with far less fortitude and are more susceptible to shock than those of dull and obtuse intellects and blunted sensibilities. The author

reported a case in point. In laying the foundation of a bridge across the Pee Dee river, in South Carolina, an immense block of granite, weighing over a ton, was being lowered into a pit forty-four feet in depth, at the bottom of which was a man who was to direct when it was in proper position. When this huge block of stone was suspended over the pit the cable holding it began to slip, and the man below was warned to crouch in a corner, as it would inevitably fall. The rock did fall, and the man in the pit miraculously escaped without injury, but he was taken out in a perfectly lifeless condition, and was exceedingly ill for more than a week.

Dr. Edwin Ricketts, of Cincinnati, read a paper entitled **Cholecystotomy, with the Report of a Case.**

He had operated thirteen times for obstruction of the gall ducts. A lady, 34 years of age, married, consulted him last June. She had never suffered markedly from jaundice, nor from acute attacks of hepatic colic, nor marked distension over the region of the gall-bladder; abdominal wall at least three inches in thickness; some general tenderness of the liver was elicited by percussion. The patient had the characteristic putty-colored stools, and was losing flesh rapidly. The author advocated allowing a glass drainage tube to remain in until the common duct was opened, and then, if necessary, to make an anastomosis between the gall bladder and the duodenum.

MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

[We regret that we have not had the space to spare to the lengthy paper of Dr. Frederick Sohon, of Washington, D. C., which occupied two meetings of the Society, April 11th and 25th, 1892. Even now we have to content ourselves with the following full abstract.—EDITOR.]

Hypnotism.

April 11th.—In beginning his paper Dr. Sohon said it was not his purpose to recommend the wholesale practice of the art, or even to advocate its general employment as a therapeutic agent; but as the storm of condemnation and misrepresentation which has accompanied the subject throughout this and the last century has lately increased

in severity, it behooves all thinking men, especially physicians, to have an intelligent comprehension of *what hypnotism is and what it is not*. After speaking of its alliance with the studies of medicine, physiology, psychology, metaphysics, etc., and stating that it is not an artificial state producible in mankind alone, but a series of natural phenomena shown according to nature's laws in all creatures of intelligence, or even mere instinct, the past history of the subject was reviewed.

In pre-historic ages, when man did not possess the groundwork of scientific knowledge that would enable him to reason by induction or analogy over what he observed, he grasped only at what was brought directly before him; and hence many phenomena, strangely different from those usually observed, were ascribed to preternatural causes, and came to be regarded in a religious light. In early historic times, the mysteriousness of these phenomena still secured them a place among the religious in the form of oracles, prophets, trance-mediums, etc. With the advent of the different teachings of the Christian religion, many of these practices and superstitions were discarded and, with the gradual growth of more accurate knowledge, were forgotten, though revived from time to time under different forms of the Black Art, or occult studies, among small sects.

With the impulse to scientific investigation in the last century, the subject was again discussed, but it was not until the general advances in studies, on which it depends, of the present century, that the subject could be rationally understood. More particularly were mentioned the history of Egypt, India, Greece, and the Middle Ages and incidents of recent and contemporaneous times, and the practices and beliefs of savage and semi-civilized races, and the recorded studies and experiments of those observers who have placed the subject on a scientific basis.

In a chapter devoted to "Suggestions," the writer claimed that too often the hypnotic state is regarded as something entirely distinct from the natural condition of the subject, because the many different ways in which the processes of ideation may be instituted are not kept in mind.

Under the title of *Suggestion*, he includes any word, motion, sensation, object, etc., the perception of which would occasion an impulse to psychic activity. They may be classed as *primary* or *direct*, and *secondary* or *indirect*.

Auto-suggestions, are conscious or unconscious deductions from some previous memory or present perception. Ac-

according to their effects, suggestions may be transient, limited, or permanent, and may be simple and accumulative, or lead to the inciting of auto-suggestions. The methods of receiving impressions in the hypnotic state, are only those of the waking state; and telepathy, thought-reading, clairvoyance, etc., should not be considered as synonymous with hypnotism.

Hypnotic phenomena, carefully considered, evince the existence of no other powers or forces than those active in the waking state, though these may be here accentuated. The claims that would credit the somnambulist with what we may call preternatural powers are numerous, and with the exception of a very small number, can at once be stamped as worthless, in that they show plainly the results of auto-suggestions, while the few isolated cases that, as recorded, seem to have been carefully studied, one not familiar with all the surroundings and circumstances, and intimate with the subject himself, can neither approve nor deny. After giving examples of the different methods of giving a suggestion, particularly of the minor and obscure forms that would unwittingly lead to a wrong interpretation of the resulting phenomena, the induction of the hypnotic state was considered. It is self-induced, and results from emotional causes, or through the mediation of objects or persons.

The customary methods of producing the hypnotic sleep were mentioned. The differences of opinion of the hypnotic sleep are occasioned by the operators confining themselves too closely to a fixed system. *Any* word, motion, sensation, etc., could be carried on in such a manner as to lead to sleep, and *any* word, mechanical irritation, etc., can be made to awaken them. (Demonstration by the employment of unusual methods). But it is not necessary that the person should sleep to be considered hypnotized.—(Demonstration).

The waking state, sleep and somnambulism can best be considered in their relationship as forming a circle with the vague intervening states, abstraction, fascination, reverie, etc., etc., connecting so that each has its indiscernable margin blended with that of the others. Somnambulism begins approximately where the subjective processes of irregular dreams lead to objective manifestations. If we start at the passive point of true sleep, the hypnotic state in which the faculties can be made to act in this characteristic manner, and in the other direction covers the state of somnambulism to where it merges into the state of self-conscious activity, somnambulism can be created from both the or-

dinary waking condition and the habitual and induced sleeps.

The ordinary night sleep and the sleep induced by extended suggestions, as long as they are not interfered with, are identical. The question of rapport or personal relationship between the operator and subject, was here dwelt on, and the absence of any essential hypnotic relationship demonstrated. The balance of the evening was spent in demonstrations of the physiological and psychical changes possible in this state. The induced alteration of the reflexes, and the control of the brain over the muscular, sensory, and glandular systems, and the functions of organic life, were shown. The inhibition and accentuations of the functions of the special senses, and the internal faculties, etc., were experimentally shown, and the explanation from a psychic standpoint was followed by a thorough consideration of the judgment, memory, and will, and the personal character during this condition, as shown by the subjects present—including double personality, etc. Several examples were shown of the action of complicated and incomplete suggestions in the form of post-hypnotic phenomena, and of the independent action of separate parts of the body (therefore brain), the one side being awake and active, the other asleep and powerless.

In speaking of occult manifestations, the Doctor showed how easy it was to be deceived, and how slight a cause was required to give seeming inexplicable and preternatural results.

In speaking of the charges of subsequent ill effects, the speaker said he was willing to grant all the facts that have ever been published, and even more, but that such bad results were caused by ignorance rather than knowledge. Ill effects cannot result from the induction of the sleep itself, but can and do follow misuse or unintentional mismanagement of the individual in this state. This peculiar susceptible state is one for which untold powers for good or evil can be developed, morally as well as physically; and while the speaker felt warranted from his long experience and study of the subject to demonstrate its possibilities and limits to the Society, it was not with the intention to have anyone rashly imitate his example, but to lead to a thoughtful consideration by the members of the similar phenomena constantly occurring in their practice and in every-day life.

Second Meeting, April 25.—After a brief *resumé* of the principal points developed at the previous meeting, the speaker

mentioned the different classes of explanations that have been advanced to account for the hypnotic phenomena by various writers. They all have in common the object of explaining, by some *special* causes, these phenomena which seemingly have no connection with the manifestations of ordinary life, and as having no relation with the person's proper self.

The speaker's views as developed at the last meeting, and given now, were the direct contrary. Whatever is capable of being shown in the hypnotic state, is merely a variation of the ordinary phenomena produced by the forced multiple associations of such suggestions as in the ordinary state would produce such usual phenomena.

[The psychic consideration of these processes will appear as a separate paper.]

The practical applications of hypnotism were then taken up. As all *legitimate* cases in which this can be of any use can properly come within the scope of the physician, and as any possible bad results will usually affect the health of the subject, its employment should be confined to properly educated physicians, and he should never employ it without a definite purpose and a full appreciation of his responsibility. While the speaker has never occasioned even the slightest ill-effect, he has known inexperienced operators to do so, and has several times been called upon to undo the disastrous work of rash novices, who for fun played with this powerful agent.

As bad results are, or can be prevented or righted, and hence are more than counterbalanced by the good that can be derived by an intelligent and judicious application of hypnotic suggestion it has a limited field in therapeutics; but where it is indicated as the appropriate agent, its place cannot be filled by any other means or procedures. But its use in its more pronounced forms must be properly understood; we must know the indications, its dosage and its physiological action, and not use it in a shot-gun manner. That permanent good, and nothing but good, is invariably accomplished, hundreds of capable and reliable men here and abroad testify. [Examples.] The subject is becoming one of great importance to the legal fraternity, though the extent of its connection with the law, as appreciated with one conversant with the study, has not been realized as yet by the courts [Examples given.]

It may also be used to correct vicious habits, dangerous tendencies, or irregular dispositions in children.

October 10th.—Dr. John E. Walsh reported a

Case of Spontaneous Umbilical Hæmorrhage in an Infant.*

Mary, colored, single, age 17, gave natural birth at full term to a large male child, January 21st. On 23rd, cord dropped off. On 31st, 7 A. M., bleeding from navel was noticed. Applications of liq. ferri. subsulph. and pressure checked bleeding, but did not stop it. Collodion and compress failed up to 10:30 A. M., when two needles were passed at right angles through the abdominal wall including the umbilicus, and a silk ligature was tied around and below them, which entirely checked the external hæmorrhage. Tinct. chloride of iron and sulphuric acid were administered. February 1st. Small quantity of blood passed per rectum; child grew weaker and weaker, and died next day. *Post-mortem* revealed nothing as to cause of hæmorrhage—not even blood in the intestines. Both the umbilical vein and artery were pervious and contained dark fluid blood, while the abdominal cavity was filled with it; no clots at all were found.

A peculiarity connected with this case is mentioned by Dr. Bovée in his excellent and very exhaustive paper (*Jour. Amer. Med. Asso.*, Vol. XVI, Nos. 16 and 17), in the report of the first of his five cases, namely, that for several months preceding labor both mothers (Dr. Bovée's patient and Dr. Walsh's, as now reported), had periodical hæmorrhages from the uterus—suggesting that both patients tried to produce abortion. But what bearing these hæmorrhages had on the infantile omphalorrhagia is a question.

In the discussion, Dr. I. S. Stone said Dr. Bovée should open the discussion on account of his familiarity with the subject. He had not given the subject special study. Had seen one case which died—compressure and surgical ligature having been used. There was no hæmorrhage into the bowels. Did not know of any cases of recovery.

Dr. L. Eliot said, our text books upon obstetrics do not treat of umbilical hæmorrhage at any length; they all say it is a rare occurrence; in his opinion this is wrong. Many physicians report deaths from this cause, as congenital debility, icterus neonatorum, and such like causes. In studying umbilical hæmorrhage for a paper before the American Association of Obstetrics and Gynæcologists (see *Trans. Amer. Asso. Obstet. and Gyn.*, Vol. II), he experienced great

*The following is a brief of the case as reported in the November number *Virginia Medical Monthly*, where *navel* is misspelled naval.

difficulty in obtaining statistics from physicians over the country. The reports of the health officer of the District of Columbia show the mortality statistics of umbilical hæmorrhage as follows:

			Male Whites.	Female Whites.	Male Colored.	Female Colored.	Total
Year ending	Sept.	30, 1874...	..	...	...	1	1
"	"	30, 1875...	..	...	4	6	10
"	"	30, 1876...	..	1	3	2	6
"	"	30, 1877...	1	...	2	5	8
"	June	30, 1878...	1	...	2	...	3
"	"	30, 1879...	1	...	7	...	8
"	"	30, 1880...	2	...	3	3	8
"	"	30, 1881...	.	...	3	5	8
"	"	30, 1882...	1	2	4	2	9
"	"	30, 1883...	..	...	...	1	1
"	"	30, 1884...	1	1	1	1	4
"	"	30, 1885...	2	...	4	3	9
"	"	30, 1886...	1	...	3	1	5
"	"	30, 1887...	..	...	5	2	7
"	"	30, 1888...	..	...	2	...	2
"	"	30, 1889...	..	3	6	2	11
"	"	30, 1890...	..	...	4	1	4
"	"	30, 1891...	1	...	6	1	8
			11	7	58	36	112

Males 69, Females 43; White 18, Colored 94; Color not stated, 1.

These 113 cases are tabulated under the heads developmental and violence. Rohé has seen one case in 1,700 labors; Hirst has seen several cases.

As causes of umbilical hæmorrhage, we have syphilis, Winckel's disease, traumatism. If it should depend upon a weakened state of the blood-vessels and a want of coagulability of the blood, treatment will avail but little. Turpentine, aromatic sulphuric acid, Monsel's salt, plaster of Paris, Lubin's baby powder, new ligature, ligature *en masse*, and ligature within the abdomen have all been tried. Has had five cases, of which two recovered. Upon one of the fatal, a laparotomy was done, and the vessels ligated within the abdomen; it lived thirty-eight hours after the operation, and there was no recurrence of the bleeding.

Dr. L. K. Beatty said he had not seen one case in which there was hæmorrhage from the cord on the second day, and ligation was tried without avail.

Dr. C. Mayfield asked, "Has the time of the separation of the cord anything to do with the hæmorrhage?"

Dr. F. B. Bishop recalled a case in which there was hæmorrhage into the bowels, as blood was passed freely per rectum, before death, which took place about third day from the beginning of symptoms. The abdomen became very much distended. There was no external bleeding. Had never yet made a diagnosis of the case. There was no autopsy. As all these cases of spontaneous umbilical hæmorrhage seem to be accompanied with a hæmorrhage from the bowels, and into the peritoneal cavity, indicating a hæmorrhagic diathesis, it is possible that this case may have been one of this type, with the hæmorrhage all internal.

Dr. E. L. Morgan said, personally he had no experience with this disease. Dr. William Lee, of Baltimore, Md., has collected 100 cases, in which he gives the ages at which umbilical hæmorrhage has occurred, as follows:

On the first day.....	4 cases.
On the second day.....	8 "
On the third day.....	7 "
On the fourth day.....	6 "
Fifth to sixth day.....	28 "
Sixth to twelfth day.....	20 "
Twelfth to sixteenth day.....	21 "
Twenty-fourth to sixtieth day.....	2 "
Sixteenth to twenty-fourth day.....	4 "

Thus, from the fifth to sixteenth days inclusive, 69 per cent. of these cases occurred. What effect has race and nationality in this class of cases?

Dr. W. P. Carr said: Umbilical hæmorrhage was simply a symptom of septic infection. Frequently connected with hæmorrhages from the liver and other places, and also icterus neonatorum. Severe forms are fatal.

Dr. F. B. Bishop said: Umbilical hæmorrhage does not cause hæmorrhage into the bowels, but may be due to the same causes.

Dr. F. T. Chamberlin inquired whether sex had anything to do with it? The male sex is represented in two-thirds of the cases. Generally occurs before, or at, the time of separation of cord, and is in such cases most fatal. Minot's statistics showed the average age at beginning of hæmorrhage to be eight days; and from that we would expect the larger number of cases to occur after separation of cord, as that usually happens from the fourth to sixth day.

The average mortality is about 70 per cent. There is often malformation of bile duct, stomach, spleen, or the heart. In such cases, hæmorrhage usually occurs from other parts of the body—eyes, roof of mouth, feet, bowels, or stomach.

Blood is non-coagulable and very thin; the disease is an indication of a general condition, but cause is often unknown. May be a slight septic inflammation of blood vessels, thus preventing a proper closure of them—the infiltration of tissue preventing the conical form of contraction so often noticed in severed vessels. Hæmorrhagic diathesis probably plays no part in this condition. For that diathesis usually is noticed not before the second year, and this trouble is incident to very early independent life.

Dr. J. M. Van Cott, of Brooklyn, has done some work in the pathology of this condition, but nothing decisive. Syphilis is a patent cause. Campbell's case—syphilitic—was delivered by him in an almshouse, of a woman he had previously treated for syphilis, and who did not know the paternity of the child. At two months the child thrived on 20 to 30 grains of iodide of potash daily. Klebs and Eppinger attribute the trouble to the *monas hæmorrhagicum*, a micrococcus they have studied.

Whether race has a causative influence, Dr. Chamberlin is unable to state; the pathology being not well understood, and the result so frightfully fatal, there have been used hundreds of remedies for it.

Probably the best method of treatment is a combined internal and local medication—internally tinct. ferri chlorid. and acidi sulph. arom., and locally some mild astringent; Should slight hæmorrhage continue, then plaster of Paris or figure 8 ligatures over pins, or both. These failing, he would apply the Dokin ligature or transfixion, which is done as follows: A hare-lip pin is passed through the abdominal wall, under the hypogastric and back through abdominal wall, *on a level with lower border of umbilicus*. This transfixion he finds sufficient to control arterial hæmorrhages, and for venous hæmorrhage he applies a figure 8 ligature over the ends of the pin, including the umbilicus in it.

Dr. I. S. Stone said: He questions septic infection as being a cause. We know midwives use anything in tying the cord. His case presented no septic infection.

Dr. W. P. Carr referred especially to septic infection from

scalp and other wounds; did not refer particularly to infection of the cord.

Dr. I. S. Stone: In cases of septic invasion from other causes, we do not find umbilical hæmorrhages.

Dr. Walsh, in closing the discussion, said: After what has been said, there is little left for me to say in conclusion. It has been asked if race seems to have any influence in causing this affection. I do not know how it is in other places, but here, where the colored race forms about one-third of our population, statistics show that five out of six of these cases are colored. I would also state, in regard to the pathology of the disease, that Klebs and Eppinger have described a micrococcus found in the blood of such cases, and have given to it the name *monas hæmorrhagicum*.

November 14th, 1892.—Discussion of Dr. Llewellyn Elliot's paper (see page 841) on

A Case of Aneurism of the Ascending Aorta.

Dr. Mayfield said: The diagnosis of aneurism of the aorta is a matter of difficulty, although lecturers on surgery taught how easy it is to make a correct diagnosis. He had seen a case diagnosed as aneurism of the abdominal aorta; there was pulsation with bruit. The man became despondent, and committed suicide. At the necroscopy, curvature of the spine, with great lumbar prominence, was found, which gave the symptoms of aneurism. He had seen another case, which had been diagnosed by prominent physicians as cardiac hypertrophy; there were in this case no physical signs to point to aneurism; he had determined the presence of an aneurism, by observing a paralysis of the left vocal cord in adduction. He had not seen any benefit from the use of iodide of potassium.

Dr. Sohon said: Aortic aneurisms are not uncommon in large dispensary climes, where patients are exposed by their surroundings, habits and occupations, to rheumatism and other exciting causes of aneurism to a greater extent than those patients who consult us in private practice. He would lay more emphasis on syphilis, being an etiological factor, than the reader of the paper had done, and would add whiskey as a provoking, abetting element. The specimen exhibited is rather remarkable, in that, despite the immense size of the aneurism, the heart is not hypertrophied, there being very little thickening of the walls; and the organ itself is really less than normal size. This may be due to the alcohol in which it is preserved. He believes in the power

of iodide of potassium to favor the deposition of fibrin in the sac. He related the case of a colored male, forty years of age. The symptoms pointed to some obscure disease of the heart. After a period of observation, a diagnosis of aneurism of the ascending arch of the aorta was made. There were, among other symptoms, attacks of palpitation, dyspnoea and slight hypertrophy of the heart. He refused hospital treatment; was given fifteen grains of iodide of potassium three times a day with rest; and notwithstanding the unsanitary conditions by which he was surrounded, he improved. His attendance at the clinic was irregular, but under the iodide treatment the sac became smaller, and a clot formed in it.

Dr. I. S. Stone asked what was the theory of the action of the iodide in this case, since it was usually given to promote absorption and not for the purpose of obtaining the deposition of fibrin; and whether some of the beneficial effects following its use should not be ascribed to the action of the drug directly upon the heart.

Dr. Adams asked what became of the supposed clot in the interval between the attendances of the patient at the clinic.

Dr. Mayfield asked whether some of the improvement might not be attributed to the effect of the more quiet mode of life which the patient led while under treatment.

Dr. Sohon said: He would not attempt to elucidate the different theories as to the mode of action of the iodide. It was due probably to chemical changes in the blood and to physical conditions controlling the blood stream in the aneurism. The drug has also a soothing and regulating influence on the heart's action. The question of Dr. Adams he was unable to answer. His object in relating the case was to show, that in his experience, a clot usually forms while a patient with aneurism is taking the drug, and that as conditions within the sac approach nearer to the normal, the heart's labor is decidedly diminished; but would add, that absolute quiet was a great factor in the treatment.

Dr. Eliot, in closing, said: The smallness of the heart in this case was not due to the action of the alcohol in which it had been preserved, but was one of those singular things found upon post mortem. The effect of the iodide would be more lasting did patients apply for treatment early and continue it long enough. This is rarely the case, for a diagnosis may be obscure and the treatment directed to the condition of the heart and not to the correct disease. The

rationale of the action of the iodide he could not explain. After the sac has reached some size, too much stress must not be set upon its effects. He had seen three cases of aneurism of the aorta; one had antisiphilitic treatment (iodide of potassium) continuously for two years, as a patient in hospital, but no good effects upon the aneurism resulted. The treatment he would advocate was surgical, although the electrical affords fair results.

NORTH-TEXAS MEDICAL ASSOCIATION.

The Semi-Annual Session, held in Fort Worth, Texas, December 13-15, 1892, was well attended as to numbers, and brilliant as to the representative talent of the State. The meeting was called to order by Dr. Thompson, of Fort Worth, who introduced Dr. W. B. Burts, of Fort Worth, to deliver the Address of Welcome. Judge Flournoy, on the part of the citizens, also welcomed the visiting doctors. Dr. T. M. Taylor, of Sherman, President of the Association, acknowledged the welcomes.

The first paper was read by Dr. S. E. Milliken, of New York city, on *Femoral Hernia*.

Dr. J. M. Inge, of Denton, Tex., reported a case of *Ovarian Cystoma*, weighing twenty-eight pounds, removed by laparotomy from an unmarried girl. The pedicle was ligated with silk. In the after-treatment, at the request of the patient, he kept the bowels open by the administration of castor-oil instead of sulphate of magnesia. Dr. A. P. Brown, of Fort Worth, stated that he would have used magnesia sulphate to keep the bowels empty instead of castor oil.

Dr. L. Ashton, of Dallas, read a paper on *Dysentery—its Prevalence and Treatment* [which occurs as Art. VII, in this January number, 1893, *Va. Med. Monthly*.] Dr. Roy, of Whitesboro, Tex., noted that Dr. Ashton did not refer to the use of calomel in any form—a medicine that had afforded him most valuable results.

Dr. Thomas Odell, of Denton, maintained that the occurrence of dysentery is an indication of lowered vital power, and hence treated the disease as a simple inflammation of the large intestines, by hypodermics of morphia and by copious injections into the colon of cold water (40° F., if the patient could stand it). Such treatment is applicable

only in the earliest stage of the disease—even within twelve hours of the beginning. Calomel is of most use in the dysentery of children. He called attention to the fever incident to dysentery, to which Dr. Ashton had not referred in his paper.

Dr. F. P. Pearson, of Howe, said that in Alabama, when a mild form of the disease occurs, a simple astringent is often all that is required, although great benefit often follows the use of calomel and Dover's powders.

Dr. E. L. Menefee, of Fort Worth, believes dysentery is due to hepatic derangement, and therefore, an essential of the treatment is to "keep the liver acting," as the old people say.

Dr. A. P. Brown, of Fort Worth, gave some entertaining experiences common during the home-treatment of slaves before the war. He advocates eucalyptolized warm or even hot water enema with a limepipe. He uses belladonna or some of its preparations to overcome tenesmus when laudanum cannot be used. After a large experience with different drugs by the mouth, he had come now to pin his faith on arsenite of copper in $\frac{1}{100}$ th grain doses, three or four times a day, and calomel in an occasional 20 grain dose.

Dr. E. L. Menefee, of Henrietta, said that he had used arsenite of copper with hot water flushings; but he must confess that he believed that most of the cases would have got well any way. In true test cases, the greatest benefit came from the use of calomel and opium, though he would not persist in either if they did not promptly bring good results.

Dr. Ashton, in closing, said that dysentery is unquestionably a germ disease, and therefore the treatment he advocated was antiseptic. He has more faith in quinine to overcome febrile conditions than anything else. Anything that acts as a ferment should be eliminated from the diet, and the diet itself should be of the most easily stomach digestible character.

Dr. A. B. Moore, of ———, read a paper on *Treatment of Tuberculosis*, the greater part of which paper was in advocacy of the beechwood creosote treatment. He also made free use of guaiacol.

Dr. R. H. Chilton, of Dallas, called attention to the value of *treatment of laryngeal phthisis, etc.*, by local applications of iodoform to the diseased parts.

Dr. John W. Grace, of Quanah, in a paper on *Treatment of Diphtheria*, advocated constitutional treatment with large doses of calomel, instead of relying upon local treatment.

Dr. W. A. Durringer, of Fort Worth, thought it our duty as doctors to attack the bacillus wherever found; hence local treatment is necessary.

In the running discussion which followed, by Drs. J. T. Field, of Fort Worth; L. D. Moore, of Van Alstyne; Roy, of Whitewright; Van Zandt, of ———; Bacon Saunders, of Bonham, Ashton, etc.—all advocated the necessity of local treatment, while some advocated the necessity of both local and constitutional remedies.

During the Second Day the following *officers were elected* for the ensuing term: *President*, Dr. D. M. Ray, Whitewright; *Vice-President*, Dr. W. R. Howard, of Fort Worth; *Secretary*, Dr. Sam'l F. King, of Sherman; *Treasurer*, D. M. S. Hefflinger, of Blossom Prairie, Texas.

Next place of meeting, Dallas, Texas, second Tuesday of June, 1893.

The following are titles of papers read and discussed during the morning, afternoon and evening session:

Abortion and its Treatment, by D. J. E. Webb, of McKinney.

Report of a Case of Extra Uterine Pregnancy, by Dr. Wilson.

Seasonal Influence in the Etiology of Puerperal Eclampsia, by Dr. L. L. Van Zandt, of ———.

Sore Nipples of Mothers, and How to Treat Them, by Dr. P. T. Ellis, of Bells.

Conservative Gynæcology—A Plea for Medical Treatment instead of Surgical Interference—by Dr. R. Wallace, of Waco.

Report of a Case of Hæmorrhage—What is It?—by Dr. J. B. Stinson, of Sherman.

Puerperal Infection, by Dr. W. R. Howard, of Fort Worth. [This paper will be published in February number.]

Report of Case of Rigid Os Uteri, by Dr. M. R. Matthews.

Uses of Electricity in Obstetrics, by Dr. Bayard, of Dallas.

Surgery of the Gall Bladder, with Report of Three Cases of Cholecystotomy, by Dr. Bacon Saunders, of Bonham.

Potts' Disease, with Report of Cases, by Dr. M. M. Edmondson, of Dallas.

Chronic Urethritis, by Dr. C. W. Simpson, of Waxahachie.

Paper (title not stated), by Dr. B. E. Hadra, of Galveston.

The following are titles of papers presented during the session of the *third day*:

General Use of Chloroform as an Anæsthetic, in Preference to any Other Agent, by Dr. J. P. Gunby, of Sherman.

Chloroform—its Minimum Dose, and the Safest Dose with Oxygen—by Dr. Beard, of Albany.

Wounds of the Joints, with Report of Three Cases of Wounds of the Knee Joint, by Dr. D. M. Ray, of ———.

Thuja, or Oil of Cedar—New Application of an Old Drug—(referring to its useful application to nasal polypi and granulations of the nose), by Dr. Grey, of Fort Worth.

Atrophic Rhinitis, by Dr. D. M. Lederman, of New York, N. Y., read by Dr. Taylor.

Dr. Wallace read some rhyme on "The Railroad Spine," which the *Fort Worth Gazette* characterizes as "a rather whimsical poem."

Dr. Bacon Saunders, of Bonham, exhibited a garter-snake preserved in alcohol, and told a "snake story."

Adjourned *sine die*.

Analyses. Selections, etc.

Symphysiotomy—A Successful Case.

Prof. I. E. Michael, of Baltimore, during the meeting of the Clinical Society of Maryland, December 2, 1892, read a paper, entitled *Symphysiotomy—A Successful Case—A Suggestion*, in which the ancient history of the operation was briefly referred to. Dr. Harris' paper, read before the last meeting of the American Gynecological Society (*Amer. Jour. Obstet.*, Oct., 1892), giving a table, showing 44 operations from January, 1886, to July, 1892, by various operators, with one maternal death—three still-born children dying respectively at 12 and 72 hours—made a profound impression on the American profession. Dr. Charles Jewett, of Brooklyn, the first American operator, operated Sept. 30, 1892. The child died in 24 hours from the effects of long continued pressure. The recovery of the mother was uneventful. Prof. Hirst, of Philadelphia, operated Oct. 2, 1892; mother and child saved.

Dr. Michael operated at the Free Lying-in Hospital of the University of Maryland, Oct. 24, 1892. The patient was a rachitic negress, 4 feet 6 inch high; seventeen years old. Labor began on the morning of the 23d. He saw the patient at 9 P. M.; os barely admitted two fingers. Head large, and no sign of engagement. Foetal and maternal circulation good, and general condition of patient

satisfactory. It was concluded to wait for greater dilatation, and operation was postponed till morning. Operation at 9.30 A. M.; chloroform anæsthesia. Os still small; most of the amniotic fluid had escaped, and the fœtus was suffering from pressure. Fœtal head obviously large, and no possibility of engagement. The bladder was evacuated, and then the os uteri dilated until four fingers would enter. The soft tissues were incised down to the symphysis, and the attachments of the recti were separated for half an inch on each side. The finger was passed down behind the symphysis until it projected below. The soft parts from the outside below were incised down to the finger tip. An ordinary curved probe-pointed bistoury was passed behind the joint and the cartilage severed. Delivery was effected by Simpson's modification of Tarnier's forceps. Pubic separation at its highest point was $2\frac{1}{8}$ inches. Notwithstanding all precautions, the cervix was lacerated into the vaginal vault, the perineum to the verge of the anus, and the anterior vaginal vault into the operation wound. The lacerations were repaired at once with cat-gut. The wound of the symphysis was sewed with gut, the deeper stitches including the pubic ligaments. The surface was powdered with aristol and dressed with iodoform gauze. Broad adhesive strips encircled the pelvis, and were covered by a firmly applied bandage.

The puerperium was uneventful. On the ninth day the patient was allowed to sit up in bed; on the eleventh day sat up a little while in a chair; on the twelfth day could walk well and firmly. At the present time she walks all over the hospital, and as firmly as before the operation. The child died on the third day, the death being due to the pressure which had occurred previous to the delivery. Dr. Michael, since the operation, has procured a Galbiati knife which he believes would have been of great service in the operation.

Dr. Michael believes that symphysiotomy will not only to a large extent take the place of Cæsarian section and of craniotomy on the living child, in cases of contracted pelvis, but will be of service in the delivery of living children in cases of bad presentation where formerly craniotomy had been resorted to. He has examined this matter experimentally with a fœtus of large size, and a pelvis, with the soft parts attached, of comparatively small size. Placing the fœtal head into the pelvis and producing a posterior rotation of the chin, delivery was attempted by forceps, but was

found to be utterly impossible. Symphysiotomy was performed, and after the pubic bones were separated $1\frac{1}{2}$ inches, the head was easily flexed upon the trunk, and the occiput brought under the pubic arch and delivery by extension occurred in the usual way. He was so impressed with the feasibility of this operation that he intends to perform it on the first case of malposition of the head, that cannot be rectified by manipulation, which presents itself to him. In cases where the occiput is posterior, and the delivery of the child with forceps is accompanied with a great amount of violence, he thinks that this operation may be indicated.

The number of operations which have been performed the present year the world over, as collected by Dr. Harris, of Philadelphia, is 26. In this list there is no death of the mother. The statistics are remarkable, both as to the safety of the woman and the healing of the wound.

Dr. Michael said that the ligaments of the pubes offered a very considerable amount of tissue which might be caught with sutures. It would be unwise to depend upon sutures, however they may be passed. The pressure from the sides, as produced by adhesive plasters and a well applied bandage over them, is so complete, that we get a support which no suture of any kind could supply, and it would not make a very great amount of difference if the ligatures were not applied at all.

Dr. Hunter Robb thought that symphysiotomy would undoubtedly have a prominent position in obstetric surgery. On account of the simplicity of the operation there will be great danger of its being performed more often than is necessary. The pelvic measurements should be made as carefully as possible with consultants of sufficient experience before operation, just as is done when Cæsarian section is thought of. In some cases the operation is undoubtedly so clearly indicated that immediate action is justifiable; but these cases, he believed, form the large minority. Symphysiotomy does not provide for as many abnormal conditions as Cæsarian section; for example, where one has to deal with cancerous growths of the cervix, pelvic exostoses tumors of the uterus, and some deformities of the pelvic bones, it would be useless to do symphysiotomy. He believed, however, that the operation would perhaps save the lives of many children; on the other hand, it may leave undesirable results in the mother.

Dr. William S. Gardner said that this operation will

almost entirely take the place of craniotomy on the child where the condition is that of contracted pelvis. Of course nobody would dream of doing symphysiotomy for a cancerous cervix, or where the obstruction was due to any other condition in the pelvis than that of contraction. The operation will also cut in very largely upon the Cæsarian sections—especially those Cæsarian sections done in the United States. The fact is very well known that we have in the United States a very small number of extremely contracted pelves, and that a large percentage of the Cæsarian sections that have been done were upon women who had only what is known as the “relative indication.” With reference to the suturing of the pubic bones, Leopold, of Dresden, remarked at the time he was stitching the wounds that he did not consider the stitching of very much value, and that he placed his main reliance upon the external bandage. The bandage which he used was made of heavy ducking, and was fastened by a buckle resembling an ordinary suspender buckle. The hips were padded with towels, and this bandage was drawn over them very tightly; in fact, so tightly that it produced sores on the crests of the ilium in his first case. In Germany, and in most of the European countries, they have a large number of cases where the degree of contraction is so extreme that symphysiotomy is not a practical operation. The Galbiati knife is probably of great convenience to the operator.

Dr. Norment was particularly interested in the suggestion which Dr. Michael made as to the performance of symphysiotomy to save the necessity of craniotomy upon the living child, on account of malposition of the foetus. He had once been compelled to do craniotomy in a face presentation, chin posterior. He saw very readily wherein the operation of symphysiotomy would give relief to that condition. It is an operation which is not to be attempted by any and every one. As Dr. Robb said, it should not be resorted to until after the judgment of able consultation has been passed upon it. The necessity of getting consultation or of getting some one else to do the operation would take away from it a great part of its service, because often in private practice the delay necessary to secure these things would be dangerous to the mother.

Dr. Branham thought that the operation was still on trial, and that it would not be best to jump to the conclusion, as is often done when these operations are revived or first brought out, that it is to be a continued success. The statis-

tics on the subject, as presented, are extremely favorable to the operation, and it seems undoubtedly that the very recent operations have been quite successful; but even since the introduction of antiseptic methods the operations done between the years 1880 and 1886, and collected by Morrisani, give a mortality of 8 in 18 operations. Of course the mortality seems to have been reduced almost to nothing; but he is inclined to think that more than likely the favorable cases have been reported and the unfavorable cases have not. It hardly seems probable that an operation could be so much improved since 1886. A good many cases which have gotten well have been followed by chronic disease of the bones about the pelvis. The probabilities are that better antiseptic precautions have diminished the frequency of this sequel. It is more probable that there will be a certain number of cases in which more or less permanent injury will result. The operation will, doubtless, have a future; still we should not conclude, until these cases have been done for a long time and the final results as to the condition of the pelvic bones are known, that this operation is going to take the place of Cæsarian section. As far as operation in cases of impaction is concerned, if it can be done in time to save the child it is a very good thing, and will doubtless be carried out in a great many cases.

Dr. Michael, in concluding the discussion, remarked that of course the operation of symphysiotomy in case of tumor and cancer and that sort of thing is not to be thought of. It only applies to such conditions as can be changed by the effect upon the bones. The discussion of the question of symphysiotomy in a case of malposition can only come up when the head is down and impacted. With a child dead, and posterior chin, or a child nearly dead, of course symphysiotomy is not to be thought of, but with a jammed head and a living child, where the alternative rests between craniotomy and symphysiotomy, the latter is to be elected. Dr. Branham's position in regard to conservatism is a proper one. We should always receive new operations with a certain amount of scepticism, and it is very well to look closely into the results of operations before jumping to conclusions. What he says in regard to operations between 1880 and 1886 is perfectly correct; but if he will look over hernia or any other class of operations in which much tissue is involved or cavities of importance invaded, which were made within the same period, he will find that the mortality was greater than it is to-day. Even the opera-

tion of Caesarian section has improved wonderfully since the period mentioned. As to the matter of reporting only favorable cases, we certainly have a complete record of the work of men who are prominent in these branches, and in whom the suppression of unsuccessful cases would be simply disgraceful. Dr. Michael is firmly convinced, from Dr. Harris' figures, that there is an amount of improvement in the results of symphysiotomy due to antiseptics that is represented by the reported cases. Of course there must be concealed cases of any operation of gravity, but the reports we have are fully as reliable as reports of any subject of this sort. We have not here an operation which is on trial. When we can present a record of 52 cases, it strikes me that the utility of the operation for saving life has been demonstrated. If we do not accept this number of cases as proving it, then he does not see how we are ever going to prove it. We should not hinder the wheels of progress by referring to the bad work of ignorant people. He thinks the utility of the operation is demonstrated.

Therapy of Phenacetine.

Dr. John S. Shoemaker (*Mat. Med., Pharmacol. and Therapo.*, Vol. II), in summarizing the uses of phenacetine, says that it was originally introduced into medical practice as an antipyretic, and subsequently was found to possess analgesic powers. In diseases attended by hyperexia, such as rheumatism, pneumonia, typhoid fever, and phthisis pulmonalis, it exerts a very happy effect in about half the dose of antipyrine, the ordinary dose being from three to eight grains. The mortality of the typhoid fever of children has been very materially reduced by its employment. The fall of temperature does not occur until half an hour after the drug has been taken, and the effect continues from four to eight hours. As an antipyretic, phenacetine is considered by many good authorities, as the safest and most efficient member of the aniline group. In epidemic influenza, it rapidly relieves the muscular pains and favors diaphoresis; the catarrhal symptoms subsequently require other remedies. In ordinary colds, one or two five grain pills of phenacetine remove all symptoms. The combination of salol with phenacetine [or salophen], is especially useful in influenza and rheumatism. The analgesic effects of phenacetine are very marked in various forms of headache, including migrain and the headaches from eye-strain, having the advantage over antipyrine in not so frequently causing a

rash. In the neuralgic pains of *tabes dorsalis*, in *herpes zoster*, and *intercostal neuralgia*, five grain doses, given every hour for three or four hours, usually afford complete relief and cause sleep. It is extremely useful in chronic neuritis, and according to Kater, is unsurpassed in the treatment of cerebral disorder due to excessive indulgence in alcoholic drinks. In whooping cough, one-half grain doses dissolved in ten drops of glycerin, are readily taken by children, and afford prompt relief, permitting sleep and ameliorating the attacks. In delirium, a dose of ten grains will usually afford a quiet night. Mahnert considers phenacetine a specific in acute articular rheumatism, as it reduces fever, relieves pain, and lessens the duration of the attacks. It has been found useful in some cases of gonorrhœal rheumatism, and is worthy of more extended trial in this rebellious affection. Given several hours before the time of the paroxysm of intermittent fever, it prevents the chill. In insomnia, from simple exhaustion, it acts admirably.

Prescription for Ear-Ache.

The following prescription will be found useful in alleviating pain in sub-acute inflammations of the middle ear, in the late stages of acute inflammation, in sub-acute inflammatory affections of the tympanic membrane, and generally in ear-ache where there are no definite indications for operative interference. It may be used whether there is or is not discharge from the ear. Certain observations have made Dr. John Dunn, Chief of Clinic of the Richmond Eye, Ear, and Throat Infirmary (who furnishes this note), believe it has a bacteriocidal value; it may be sprayed directly into the middle ear, where there is a hole in the drum-head.

R.—Menthol.....gr. xx
 Gum camphor.....gr. xx
 Liq. albolene.....℥j—Misce.

Sig:—Drop into the ear several times daily.

If pus be found, wash out the external ear before using.

Jinks (examining his prescription)—These doctors are awfully fond of Latin, aren't they?

Filkins—Yes; it's a dead language, you know.

Book Notices.

Student's Quiz Series—Pocket Series—Lea Brothers & Co.
Series Edited by BERN H. GALLAUDET, M. D., Demonstrator of
 Anatomy, College Physicians and Surgeons, New York, etc. Large
 12mo.

This cloth-bound Series has been written with exceptional care by authors selected from able specialists and teachers in New York city to meet the needs of students, those preparing for examination before examining boards, and for practitioners, whose limited opportunities for reading compel them to seek in haste the pith of a subject; the advantages to the teacher and quiz-master are obvious. The Series is arranged in the form of questions and answers, and will comprise thirteen volumes of from 170 to 375 pages, at the uniform price of \$1 per volume, except the two double-size numbers on *Anatomy* and *Surgery*. We have to content ourselves with an unreserved favorable mention of each of the ten volumes received of Messrs. Lea Brothers & Co., of Philadelphia, Pa., which are as follows:

1. *Anatomy* (double number, 376 pages, \$1.75). By FRED. J. BROCKWAY, M. D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, New York; and A. O'MALLEY, M. D., Instructor in Surgery, New York Polyclinic. This volume presents some new descriptions not accessible to all students, although much of the book is a compilation from the standard works of Henle, Quain, and Gray, besides notes on the lectures of Prof. George S. Huntington, of the College of Physicians and Surgeons, New York city.
2. *Physiology* (213 pages). By FREDERICK A. MANNING, M. D., Attending Surgeon Manhattan Hospital, etc., New York. This is practically an abstract of standard treatises, such as those of Dalton, Foster, Kirke's, and Prudden's *Practical Normal Histology*. The arrangement is mostly that adopted by Kirke; many of the cuts are from Dalton; while Foster's *Text-Book* serves generally as the reference-book.
3. *Histology, Pathology, and Bacteriology* (165 pages). By BENNETT S. BEACH, M. D., Lecturer on Histology, Pathology, and Bacteriology, New York Polyclinic. The author could not have done more within the compass of such a Manual than to present the *main* facts of each

subject, which he has admirably done. He has drawn freely upon the works of Delafield, Prudden, Schæfer, Klein, Zeigler, and Fraenkel.

4. *Materia Medica and Therapeutics* (223 pages). By L. F. WARNER, M. D., Attending Physician St. Bartholomew's Hospital, New York. While this Manual is based principally upon such acknowledged authorities as Brunton, Bartholow, Wood, Bruce, Edes, Biddle, etc., special attention has been given to those drugs which have recently recommended themselves to therapeutists. Appended to the book is a "table of doses;" "important poisons and their antidotes," "incompatibilities," "classification of drugs according to their action."
5. *Practice of Medicine* (221 pages). By EDWIN T. DOUBLEDAY, M. D., Attending Physician New York Hospital, Out-Patient Department, and J. DARWIN NAGEL, M. D., Visiting Physician to the French Hospital. The principal authorities consulted in the compilation of this book are Fagge, Charcot, Strümpfel, Niemeyer, Bennett, Flint, Delafield, Gowers, and various hospital reports. Theories regarding the origin of diseases have been avoided. A third of the book is taken up with diseases of the nervous system.
6. *Genito-Urinary and Venereal Diseases* (178 pages). By CHARLES H. CHETWOOD, M. D., Visiting Surgeon Demilt Dispensary, Department of Surgery and Genito-Urinary Diseases, New York. The author acknowledges his principal authority for this compilation to be the exhaustive works of Dr. Keyes. Other reference books have been Prof. Ultzmann's *Genito-Urinary Neuroses*, Sir Henry Thompson's *Clinical Lectures*, and Ashurst's *Encyclopædia of Surgery*.
7. *Diseases of the Eye, Ear, Throat and Nose* (228 pages). By FRANK E. MILLER, M. D., Throat Surgeon, Vanderbilt Clinic, New York; JAMES P. McEVoy, M. D., Throat Surgeon, Bellevue Hospital, Out-Patient Department; and JOHN E. WEEKS, M. D., Surgeon New York Eye and Ear Infirmary. The basis of the division on diseases of the eye, is a course of lectures delivered by Dr. Weeks at Bellevue Hospital Medical College—the principal authorities consulted in their preparation being Becker, Hutchinson, Juler, Knapp, Landolt, Mackenzie, Nettleship, and Czermak. Most of the work done on diseases of the throat and nose was by Drs. Evoy and Weeks, who present drawings of some of the admirable charts of Prof.

Geo. M. Leffert, used in the College of Physicians and Surgeons. The authorities principally consulted are Lennox-Browne, Bosworth, Delavan, Fraenkel, Gottstein, Knight, Krause, Lefferts, Mackenzie, Sajous, Seiler. Exactly what part of the work was done by Dr. Miller is not stated, but presumably he is chiefly responsible for the well compiled and condensed section on diseases of the ear, for which the following authorities were specially consulted: Buck, Burnett, Gruber, Greene, Politzer, Richards, and Roosa.

8. *Obstetrics* (190 pages). By CHARLES W. HAYT, M. D., House Physician, Nursery and Child's Hospital, New York. The author acknowledges his main indebtedness to Charpentier's *Cyclopædia of Obstetrics and Gynæcology*; Hirst's *System of Obstetrics*; the well known treatises of Playfair, Winckel, Lusk, and King, besides to notes taken of lectures by Dr. James W. McLane, of College of Physicians and Surgeons. The illustrations are taken from Playfair and King.
9. *Gynæcology* (208 pages). By G. W. BRATENAH, M. D., Assistant in Gynæcology, Vanderbilt Clinic, New York, and SINCLAIR TOUSEY, M. D., Assistant Surgeon, Out-Patient Department, Roosevelt Hospital, New York. The various diseases are discussed in the order of their anatomical position, beginning at the vulva. The compilation is based on notes taken of lectures by Prof. G. M. Tuttle, and on the standard works by Pozzi, Thomas and Mundé, Mann's *System*, Martin, Schroeder, Schultze, Hegar, and Kaltenbach, Skene, and Hart, and Barbour.
10. *Diseases of Children* (159 pages). By C. ALEXANDER RHODES, M. D., Instructor in Diseases of Children, New York Post-Graduate Medical College. After awarding credit to Dr. John Dorning for the excellent articles on stomatitis and enuresis; to various periodicals for special information, etc., the author states that most of the Manual is compiled from such authorities as Keating's *Encyclopædia of the Diseases of Children*, the works of J. Lewis Smith, Eustace Smith, Jacobi, Vogel, Meigs and Pepper; and on general subjects, he has consulted Pepper's *System of Medicine*; Reynold's *System of Medicine*; Buck's *Reference Hand-Book of the Medical Sciences*; besides the standard works on *Practice*, by Osler, Loomis, Flint, Watson, Roberts, etc.

We omit mention of the volumes on *Chemistry and Phy-*

sics, Surgery, and Diseases of the Skin, only because not yet received. But basing an estimate of these three upon the merits of the ten of the Quiz-Series above noted, we must conclude that the entire *Series* of thirteen books, without exception, will prove valuable aids to the Professor, the student, the practitioner, the examiner, and to the party who has to prepare for examinations. Of course, it is understood, that none of the "Series" is intended to take the place of the full text-books or treatises; it is presumed that such treatises have been studied, or that full courses of lectures by competent professors, etc., have been followed. Then, to review one's learning on the several subjects, this "Series" comes into use most acceptably.

International Clinics—*A Quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, Genito Urinary Surgery, Gynæcology, Ophthalmology, Laryngology, Otology, and Dermatology.* By Professors and Lecturers in the Leading Medical Colleges of the United States, Great Britain, and Canada. Edited by JOHN M. KEATING, M. D., LL. D., Colorado Springs, Col. (formerly of Philadelphia, Pa.), JUDSON DALLAND, M. D., Philadelphia, Pa., J. MITCHELL BRUCE, M. D., F. R. C. P., London, England, DAVID W. FINLAY, M. D., F. R. C. P., Aberdeen, Scotland. J. B. Lippincott Co., Philadelphia, Pa., Publishers.

We have only recently received the January, April, July, and October, 1892, numbers of this excellent quarterly, issued in book form; hence the delay in noticing the more recent issues of the *International Clinics*. Each of the four numbers received is cloth covered, the price of each of which is \$2.75 or \$11 a year; half leather binding costs \$12 a year. Each quarterly number contains about 375 octavo pages, finely printed on good paper, and the subjects are illustrated wherever necessary by wood cuts, chromo-lithographs, etc. The lectures are all well reported and revised by the generally distinguished authors; and a good index is appended to each number, which, in conjunction with the pages of contents preceding the text of each issue, make the volumes standard works. As a quarterly Series, the *International Clinics* are most heartily commended to the reading of practitioners generally. Annual subscriptions begin with the April number of each year. We have not the space to detail even the contents of the four numbers; but we have given in the title a concise description of the work. Something more definite, perhaps, may be said in the statement that the January, 1892, number contains 43 lectures on different subjects of daily practical importance by nearly as

many different lecturers or professors; the April number has 38 such lectures; the July number has 43; and the October number has 52—thus making 176 lectures on different subjects in the four numbers. Thus it will be seen that nearly every subject of common practical importance in medicine, surgery, obstetrics, pediatrics, gynæcology, ophthalmology, otology, genito-urinary diseases, electrology, etc., etc., will be covered in a continuous subscription of two or three years, when it will be time to begin again—such are now the rapid strides in medical and surgical progress. Of the large number of different lecturers, the entire territory included in the former Confederate States is complimented by the selection of only two of its many competent instructors—Drs. J. McF. Gaston, of Atlanta, and Wm. C. Dabney, of the University of Virginia.

Tuberculosis of Bones and Joints. By N. SENN, M. D., Ph.D., Professor of Practice of Surgery, Rush Medical College; Professor of Surgery, Chicago Polyclinic; Attending Surgeon Presbyterian Hospital; Surgeon-in-Chief St. Joseph's Hospital; President American Surgical Association; President Association of Military Surgeons of National Guard of United States; Permanent Member German Congress of Surgeons, etc. Illustrated with 107 Engravings (seven colored). Handsome royal 8vo., 520 pages. Extra Cloth, \$4.00 net; Sheep, \$5.00 net; Half-Russia, \$5 00 net. Philadelphia: The F. A. Davis Co., Publishers, 1231 Filbert street.

This book was needed, for it is on a subject of every day importance to the physician and surgeon, and is by an author than whom there is none better qualified for this special work. The author starts out with the proofs which establish the tubercular nature of the so-called strumous disease of bones and joints—among such proofs being the presence of tubercle bacilli in the affected tissues; the direct infection of a joint through a wound or extension of disease to it from a tubercular focus near a joint; the artificial production of bone and joint tuberculosis in animals by direct inoculation; the association of bone and joint tuberculosis with tuberculosis in other organs; the inflammatory product in bone and joint tuberculosis presents the same histological structure, and is subject to the same pathological changes as tubercle in the lungs; and, finally, tubercular affections of bones and joints react under the use of tuberculin in the same manner and with the same promptness as tubercular lesions in the lungs. The predisposition or pre-existence of this tubercular condition very readily explains

why almost the slightest degree of trauma may produce "strumous inflammation" in the bones or joints—already prepared to begin its inflammatory destruction upon the most trifling excitation. And yet the question remains, after conceding all that Dr. Senn above affirms, that if, "*with few exceptions*, all cases of chronic spondylitis are of tubercular origin and nature," how does it happen that simply the proper application of Sayre's plaster jacket, or some of its improvements, without the prolonged use of any of the constitutional remedies so generally thought to be useful in tuberculosis, and certainly without any local application to the diseased vertebræ themselves, *in the great majority of cases* so treated, checks the progress of the spondylitis, and allows the patient to get well with ankylosis of the bones? However interesting such a question may be, the practical matters of diagnosis and treatment—both medical and surgical—of diseases of bones and joints, are so thoroughly described and treated in keeping with the latest and most approved methods, that the book is on every page a treasure of information, and furnishes the most serviceable of published guides in its advice as to what to do in these serious and generally obstinate diseases.

Pocket Medical Dictionary. *Giving the Pronunciation and Definition of about 12,000 of the Principal Words Used in Medicine and the Collateral Sciences.* By GEORGE M. GOULD, A. M., M. D., Author of "A New Medical Dictionary," etc. Philadelphia: P. Blakiston, Son & Co. 1892. Long 32mo. Pp. 317. Leather, \$1.

This "Dictionary" is admirably suited to the uses of the lecture-room, or for the purposes of a medical defining vocabulary—many of the words not yet being found in any other dictionary, large or small, while all of the words are those of the living medical literature of the day. It includes five pages tables of principal arteries; six pages tables of bacilli and bacteria; three pages table of micrococci; twenty-three pages table of muscles; thirteen pages nerves; one page of spirilla; one of comparison of thermometers, and seven pages of dose-table, in both apothecary and metric system. Nothing but the excellent quality of thin paper, specially prepared for this work, could permit the addition of these fifty-nine pages of valuable tables for students. The size of the page and book allows it to be carried about in the coat breast pocket.

Manual of Physics, Being an Introduction to the Study of Physical Science. By WILLIAM PEDDIE, D. Sc., F. R. S. E. Assistant to Professor of Natural Philosophy, University of Edinburgh. New York: G. P. Putnam's Sons. 1892 Cloth. 12mo Pp 501. \$2 50. (For sale by West, Johnston & Co., Richmond).

It is unfortunate that so great a number of good students enter medical colleges without even the elementary knowledge of physics essential to make them understand many of the answers they correctly give to questions. Every one who undertakes the practice of a physical science should acquaint himself with the principles of physics. The manual under notice, designed for the use of University students, well reviews the elements of the *whole subject of Physics*, making prominent the necessity for, and the value of scientific hypotheses. The essential mathematic portions of the text have been made as simple as possible—preference being given the elementary methods of the calculus, because more simple and more natural than the process termed “calculus dodging.”

Leonard's Physician's Pocket Day-Book. Bound in Red Morocco, with Flap, Pocket, Pencil, Loop, and Red Edges. Price, postpaid, \$1. Published by *The Illustrated Medical Journal Co.*, Detroit, Mich.

This popular day-book is in its fifteenth year of publication. The front part is occupied with dose tables and other useful memoranda. It is good for *thirteen months* from the first of any month, and accommodates daily charges for fifty patients, besides having cash department and complete obstetric records. There are also columns for diagnosis, or brief record of treatment following each name. Name of patient need be written but three times a month. The book is $7\frac{1}{2}$ inches in length and $3\frac{1}{2}$ wide, so that it will carry currency bills without folding. It is bound in flexible covers, and weighs but five ounces.

Manual of Medical Jurisprudence and Toxicology. By HENRY C. CHAPMAN, M. D., Professor of Institutes of Medicine and Medical Jurisprudence, Jefferson Medical College, etc. *With 36 Illustrations, Some of which are in Colors.* Philadelphia: W. B. Saunders. 1892. Small 8vo. Pp. 237. Cloth, \$1.25 net (From Publisher.)

The prescribed limits of the work permit only the consideration of those points which the author's six year's experience as Coroner's physician of the city of Philadelphia leads him to regard as the most important for practical pur-

poses. As a manual for such purposes, this is a most excellent work, giving a great deal of practical detail in plain terms, and where needed by drawings, etc. Indeed, Chapter IX, on fœticide, is so well illustrated by colored drawings of the development of the embryo, placenta, changes undergone by the uterus during pregnancy, etc., that it would well serve as a section in a standard work on physiology. The chapter on Toxicology covers over 60 pages, and is especially serviceable as treating of the poisons of common use. The chapter on insanity, from its medico-legal standpoint, is also excellent. Indeed, it is wonderful how much of valuable information is brought into such concise language.

Accidents and Emergencies. By CHARLES W. DULLES, M. D., Physician to Rush Hospital, etc., Philadelphia. *Fourth Edition Thoroughly Revised and Enlarged.* With New Illustrations. Philadelphia: P. Blakiston, Son & Co. 1892. Cloth. 12mo. Pp. 154.

As a "Manual of the Treatment of Surgical and Medical Emergencies in the Absence of a Physician," this book has deservedly become very popular. It is useful in families, and places of business, in country homes, on railroad trains, or steamboats,—wherever competent professional services are not readily procurable. The author gives a good suggestion in advising that the owner of the book should first read it carefully, and then keep it in some handy place where it can be referred to immediately when an emergency arises. The index is very complete, and the leading words of a page are in such type as to readily catch the eye. The scope of the book includes such matters as obstructions to respiration, foreign bodies in the eye, nose and ear, unconsciousness, fits, injuries of the brain, effects of heat and cold, sprains, dislocations, fractures, wounds, poisons, domestic emergencies, etc.

Anatomy of the Peritonæum. By FRANKLIN DEXTER, M. D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, New York. *With 38 Illustrations.* New York: D. Appleton & Co. 1892. Cloth. 12mo. Pp. 86 \$1.50. (For sale by West, Johnston & Co., Richmond.)

This is a unique little volume, dependent upon its 38-page figures or diagrammatic drawings for a proper appreciation of the text, which is merely descriptive of the illustrations. The peritoneum is developed simultaneously with the intes-

tines, but is not recognizable till about the period in embryonic life when the cæcum has reached its normal position in the right iliac fossa; and then it appears as a shining membrane surrounding the blood-vessels in their bed of connective tissue. Its various stages are traced until its full development. To the anatomist, physiologist, student, and surgeon, this book is of very great value; and to all doctors it makes clear anatomical facts which are not generally understood. Credit is given Dr. Toldt, of Vienna, as being the first to present a true description of the development of the peritoneum.

Manual of Medical Jurisprudence. By ALFRED SWAIN TAYLOR, M. D., F. R. S. Revised and Edited by THOMAS STEVENSON, M. D., London. Eleventh American, Edited with Citations and Additions from the twelfth English edition, by CLARK BELL, Esq., President of the American International Medico-Legal Congress of 1893. 787 pages, 56 illustrations. Price, cloth, \$4.50; sheep, \$5 50. Lea Brothers & Co., Philadelphia, 1892.

Under the masterly hand of Clark Bell, Esq., aided by distinguished medical and legal experts, this edition has been so thoroughly revised and corrected as to leave no room for the adverse criticisms which reviewers have heaped upon some of the former editions of this standard work. This "Manual" is so comprehensive in its scope as to include apparently every conceivable phase of a medico-legal question. Thus three chapters are given to medical evidence, nineteen chapters to poisoning, fifteen to wounds and personal injuries, one to drowning, one to hanging, one to strangulation, two to suffocation, one to lightning, cold, heat, starvation; one to pregnancy, one to delivery, one to criminal abortion, eight to infanticide, one to birth, inheritance; one to legitimacy, one to paternity, one to impotency—sterility; two to rape, seven to insanity, and one to life insurance. What other matter would likely involve the physician as an expert or medical witness? Outside of its authority for courts, the author and revisers have introduced details of so many cases of interest as to make almost any page entertaining reading. To make the work of specific service to lawyers and to courts, the American reviser has cited several hundred American cases, giving to each its special reference. Whatever may be written in praise of other works on medical jurisprudence, etc., it must be said in favor of

Taylor's Medical Jurisprudence, in its present revised form, that it is invaluable alike for the attorney and the doctors who may be called to advise or give medical expert testimony.

The Mastoid Operation—Including its History, Anatomy and Pathology. By SAMUEL ELLSWORTH ALLEN, M. D. Cincinnati: Robert Clarke & Co. 1892. 12mo. Pp. 111. Cloth.

In this neatly-issued monograph, the author attempts only to present the results of his instruction under Prof. Schwartze, supplemented by considerable thought and anatomical work of his own. The six handsomely-executed plates accurately represent essential points of anatomy involved for diagnostic purposes, and for surgical procedure. The monograph concludes with two pages of indications for the operation based upon easily recognizable symptoms, which might be usefully transcribed in any book relating to the diseases of the mastoid cells.

Editorial.

Medical Examining Board for the State of Washington.

Dr. Michaux, Secretary of the Medical Examining Board of Virginia, hands us the first report of the Medical Examining Board of the State of Washington. The Board was organized May, 1890, with the following officers: Drs. G. V. Calhoun, of La Conner, President; H. R. Keylor, of Walla Walla, Secretary; C. S. Penfield, of Spokane, Treasurer. The other members are Drs. J. H. McDonald, J. D. Minkler, H. W. Dewey, J. W. Bean, H. B. Bagley, and A. B. Kibbe. Five semi-annual examinations have been held, and one hundred and sixty applicants examined, out of which number thirty-three failed. The standard required for applicants is 70 per cent. for those who have not been more than five years in practice, and 65 per cent. for those who have been in practice for a longer period. While the standard is not so high as that of the Virginia and North Carolina Boards, which is 75 per cent. for *all* applicants, we are glad to see that the State of Washington, although a young member of the great Sisterhood of North American Com-

monwealths, is alive to the importance of reforming the very defective system of medical education in the United States.

Professor of Ophthalmology in Jefferson Medical College.

The Board of Trustees of Jefferson Medical College, November 30th, 1892, on unanimous recommendation of the Faculty, elected Dr. G. E. de Schweinitz, Clinical Professor of Ophthalmology. At the time of election, Dr. de Schweinitz was Professor of Ophthalmology in the Philadelphia Polyclinic and Lecturer on Medical Ophthalmoscopy in the University of Pennsylvania.

The U. S. Pharmacopœia "1890,"

Which will be published during 1893, adopts, in great measure, the *Metric System* of weights and measures. This will doubtless create much confusion in the minds of physicians and druggists, and lead to many misunderstandings and errors. In order to provide a guide to the proper dosage, etc., Dr. Geo. M. Gould, author of "The New Medical Dictionary," has prepared a very complete table of the official and unofficial Drugs, with doses in both the *Metric* and *English* Systems. This table is published in P. Blakiston, Son & Co.'s *Physicians' Visiting List* for 1893, together with a short description of the Metric System.

Physicians' Home, or a First-Class Summer Residence for Sale—\$3,000.

A Fellow of the Medical Society of Virginia since 1871 wishes to sell his recent home in or near Waynesboro, Va. The property cost \$4,000; he will sell it for \$3,000. The dwelling is within 400 yards of Baker's Springs, which yield pure freestone water, is elevated, has ten rooms, beside cellar, stable, buggy-house, etc., with a well of excellent water in the yard. The rooms are plastered and papered; the parlor is frescoed. Whether used or not as a physician's home (for which it is well-arranged), it would make a first-class summer residence. Address inquiries "Dr. W." care *Virginia Medical Monthly*, Richmond, Va.

Jones Vestibule Sleeping Car Co.

We call the special attention of doctors, having a few dollars to invest, to this new company, which will likely prove

a repetition of the history of the Pullman stock, which brings to-day, on the open market, 100 per cent. above par. But if only a small part of what is believed to be the future success of the company be realized, an immense profit in a few years will be the result to the present purchaser of the stock. Why should not doctors take interest in such matters? Messrs. H. E. Woods & Co., of Denver, Col., will receive cash subscriptions from \$5 upwards. Write to them for Prospectus, etc. According to the testimony of many of the best Railroad men who have examined the Jones Vestibule Car, it is as far ahead of the Pullman Car as the Pullman is of the ordinary car.

Messrs. Charles Lentz & Sons' Illustrated Catalogue and Price List.

When surgical instrument makers go to so great an expense as to publish so excellent and so expensive an "Illustrated Catalogue and Price List of Surgical Instruments, Orthopædical Apparatus, Trusses, etc.," as this Philadelphia firm has done—especially when so much of their trade covers a large part of the territory in which this journal is most generally adopted, it is but right to note the fact—especially when a copy can be got by any of our subscribers who will simply write for it, addressing Messrs. Chas. Lentz & Sons, 18 North 11th St., Philadelphia, Pa. The "Catalogue" has 500 large octavo pages, and contains several thousand illustrations, beside descriptions of instruments, etc.

Gray's Text-Book on Nervous and Mental Diseases.

The popularity of the author of this work (Dr. Landon Carter Gray, Professor of Diseases of the Mind and Nervous System in the New York Polyclinic, etc.) throughout the territory which gives this journal its largest subscription patronage, coupled with the distinction he everywhere has as a neurological authority, make us specially regret that we have to postpone notice of his book just published until our next issue. We may add, however, that the volume is a closely, yet neatly printed octavo of 687 pages, with 168 fine engravings—mostly original—published by Messrs. Lea Brothers & Co., of Philadelphia, Pa.; Cloth binding, \$4.50; Leather, \$5.50.

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Original Communications.

ART. I.—A Question Relative to the Treatment of Diphtheria.*

By W. P. C. HAZEN, M. D., of Washington, D. C.

In presenting this paper, I have thought it unnecessary to give a detailed description of the disease in question, my sole object being to call attention to claims recently made by local practitioners regarding the treatment of diphtheria, based upon the present accepted theory of the pathology of the disease.

Although epidemics of diphtheria have undoubtedly prevailed at different periods, from the very beginning of the history of medicine, the disease was never accurately isolated and described until 1821, when Bretonneau, of Tours, presented his paper on the subject to the French Academy. It was he who originated the name.

Although first described so long as seventy years ago, our most valuable knowledge of the disease has been obtained within the past ten years, and yet I believe we have not found the specific treatment. In fact, notwithstanding the

*Read at a meeting of "The Medical and Surgical Society of the District of Columbia," on December 12th, 1892.

great variety of plans of treatment highly recommended by honest, but inexperienced enthusiasts, we remain about where we were before the great discoveries of Klebs and Loeffler were made.

Diphtheria, we are told by bacteriologists, is a disease caused by a living organism, the bacillus diphtheriæ, or Klebs-Loeffler bacillus. This organism was discovered by Klebs in 1883, and later was minutely studied and described by Loeffler. It is said to be found only in the diphtheritic deposits, and not in the diseased viscera or blood. The involvement of the general system is explained by the theory of the dissemination of a poison, called tox-albumin, which is generated by the bacilli during their propagation. Roux and Yersin, of Paris, state that they have succeeded in separating this poisonous principle from the bacilli, and that, by inoculating animals with it, they have produced paralyses similar to those resulting from diphtheria in man.

At present, I think there is very little doubt that the above discoveries disclose the true cause of the disease; but let us proceed a step further. The study of the bacillus diphtheriæ was soon taken up by other investigators, and their researches have brought to light certain facts which, I think, will explain to some extent the opposite results obtained by practitioners pursuing the same plan of treatment.

Dr. J. Lewis Smith, of New York, says that "it has been demonstrated by many observations that the disease heretofore designated by the term diphtheria, embraced two diseases, which may be conveniently designated diphtheria and pseudo-diphtheria." He further states that "a pseudo-membranous inflammation upon the mucous or cutaneous surface is sometimes produced by other microbes than the Klebs-Loeffler bacillus; but this bacillus—the Klebs-Loeffler—causes a disease which has distinguishing characters, especially the production of a peculiar toxine, which brings about certain definite anatomical changes in the interior of the body—a peculiar paralysis and a nephritis, attended by

an albuminuria, which does not cause dropsy or uræmic poisoning. These characters distinguish true diphtheria—the diphtheria caused by the Klebs-Loeffler bacillus—from other pseudo-membranous inflammations of microbic origin. There can be little doubt that the microbe producing pseudo-diphtheria is often mistaken for the true bacillus diphtheriæ.”

E. Klein, of London, has examined the faucial secretion and pseudo-membrane in twenty-two cases of diphtheria, and in every case found the Klebs-Loeffler bacillus. In twelve cases he found also a bacillus closely resembling that of Klebs-Loeffler in form and growth, but not pathogenic.

Solomon states that not only certain other microbes, but irritating medicinal agents have the power of exciting inflammation with fibrinous exudation, which cannot be distinguished by its appearance and anatomical characters from that of true diphtheria, *except* by the absence of the cause of the latter disease, namely, the Klebs-Loeffler bacillus.

The diphtheria complicating scarlatina is generally pseudo-diphtheria. These sore throats, says M. Sevestre, of Paris, commonly end in recovery, and they do not communicate diphtheria to neighboring children.

Wurtz and Bourges state that there is no difference between the pseudo-membranous angina of scarlatina and true diphtheria, *except* that the bacillus of Loeffler is absent from the former; but the effects of remedies are different in the two. True diphtheria, they say, is most favorably influenced by chlorine solutions, which are by no means as useful in scarlatina inflammation, while in the latter salicylic acid exhibits a curative power which is not manifested in diphtheria. They, therefore, believe that the pseudo-membranous angina of scarlatina and that of diphtheria are ordinarily distinct diseases.

After reviewing the above facts, as given by men recognized as authorities, it is logical to conclude that the disease heretofore called diphtheria must now be looked upon as

two distinct diseases, namely, diphtheria, resulting from the action of the Klebs-Loeffler bacillus, and pseudo-diphtheria, resulting from the presence of other organisms.

Of 5,072 children treated in the Child's Clinique in Strasbourg from 1878 to 1889, 938, or 21 per cent., had diphtheria, of which cases 439, or 46.7 per cent., died. Of the 499 not tracheotomized, 167, or 33.5 per cent., died. The records of the Health Office of the District of Columbia show that, since the present law in regard to diphtheria went into effect—January 1, 1891, up to December 8, 1892—there have been 964 cases officially reported. Of this number, 299 terminated fatally, representing 31+ percentage of mortality to total number cases of the disease.

Widely differing from these results are those obtained right here in Washington in private practice—one practitioner claiming fifteen successive cases without a death! How can we explain this great difference? Even allowing for the more favorable conditions existing in private practice, the difference is still remarkable. It cannot be due, as is claimed, to the particular treatment adopted, for the same methods in my own practice and in the hands of others have failed to yield like results.

From what has been recently discovered regarding the existence of pseudo-diphtheria, I feel fully justified in saying that the brilliant results of the practitioner referred to are explainable only by the very existence of this pseudo-diphtheria. I believe that in many of these cases the disease was pseudo-diphtheria, and not true diphtheria, and that the majority of them would have ended favorably with little or no local treatment.

One of the most important lessons taught by these recent investigations is the fact that it is absolutely impossible at present to diagnose truly in the beginning a case of pseudo-diphtheria from one of true diphtheria without the aid of the microscope. When we consider with how few of us this test is at all practical, it is not likely—nay, it is almost certain, that many cases treated and feared as true malignant diphtheria, are nothing more than this spurious pseudo-

diphtheria. Still, this fact should not influence us to relax our most vigorous and energetic efforts in the very beginning of every case in which there is even the slightest ground for suspecting diphtheria.

À propos of the above, Jules Simon, in order to clinically distinguish non-diphtheritic products from those of diphtheria, takes a doubtful pseudo-membrane and agitates it gently in water; if it does not fall apart, but remains in resisting and elastic layers, there is no doubt that it is diphtheritic. Dr. Macdonnel, of Montreal, says, regarding this point, that the absence of the knee-jerk in a suspected case of diphtheria is proof positive of the existence of diphtheria.

Although I may be overstepping the limits of my subject in speaking of the treatment of diphtheria, I do so with the same motive which actuated me in the beginning of these remarks on the subject.

In considering a *plan of treatment*, what are the results to be obtained? I think they are principally two—*first*, the destruction of the bacilli, and, *second*, the support of the system in general by such means as will best enable it to withstand the inroads of the poison.

That we have not yet discovered the specific for diphtheria is certain from the innumerable remedies in use and the terribly high rate of mortality which still prevails. Almost every germicide known to medicine has been employed locally to arrest the growth of and kill the fatal microbe. D'Espine, of Geneva, has observed the destructive effects of various paracitides on the Klebs-Loeffler bacillus, as follows: The development of the bacilli was arrested by corrosive sublimate, 1 part to 8000; by carbolic acid, 1 part to 50; by salicylic acid, 1 part to 2000; by chloral, 1 part to 200; and by permanganate of potash, 1 part to 2000. As a result of these observations, he recommends the use of salicylic acid, since its toxic properties are slight and its applications easy.

Loeffler states that a solution of the perchloride of mercury, of strength 1 to 10,000, will kill the bacilli in the

laboratory, provided they be exposed to its action one minute or more. It can be used as a gargle or spray. Chlorine water alternated with peroxide of hydrogen is highly recommended.

Recently a new method, called the sub-membranous, has been introduced in New York. It consists in the injection of chlorine water into the tissue beneath the false membrane. The operation is accomplished by the use of a hypodermic syringe provided with a long stem, at the end of which are several needles. The advocate of this method claims remarkable success, and it is being tried extensively in this country.

C. Smith, of London, claims a specific in the use of a mixture composed of 1 part of carbolic acid, 1 part of oil of eucalyptus, and 8 parts of turpentine. Cloths about one foot square are soaked in the mixture and placed near the face of the patient, so that he inhales the evaporations in conjunction with the vapor of boiling water, which rises from a vessel kept constantly near.

Dr. Fulton, of Philadelphia, says that in thirty-seven consecutive cases, all of which ended in recovery, he used a strong solution of nitrate of silver— \mathfrak{vj} in f. \mathfrak{ss} . of rose water—applied by means of a throat brush, the application to be made twice daily. After each application, the part treated is dusted with a pinch of the following powder:

R—Hydrarg. chlor. corros. gr. \mathfrak{j}
 Pulv. sulph. \mathfrak{ss} —Misce.

Dr. Bloodworth, of Philadelphia, says that hydrogen peroxide readily dissolves the false membrane, and at the same time has an inhibiting action upon the germ and purifies the parts affected. He further states that hydrogen peroxide possesses the following advantages, viz: It is non-irritant, colorless, odorless, tasteless, and causes no pain.

Dr. Greig, of Toronto, also says that to prevent the production and absorption of the poison produced by the bacillus, the best agent is hydrogen peroxide. It has the property of oxidizing many organic compounds, and it will undoubtedly dissolve the membrane.

Dr. Llewellyn Eliot has on several occasions called attention to his success in the use of turpentine in the treatment of diphtheria, both as a vapor for its prevention and an agent for its cure. This plan is recognized both at home and abroad.

I have reviewed the above agents and their methods of application because I have given them all, with the exception of one or two of the latest introduced, a limited trial. From the results of these practical tests, I have come to the conclusion, as before stated, that we have by no means found that agent which we can call a specific in diphtheria; yet, like many others who have had experience in the treatment of this disease, I have *my* plan of treatment. I have found that the application of peroxide of hydrogen, alternated with oleate of mercury, has yielded far better results than any of the other agents that I have tried.

While laying stress upon the fact that hydrogen peroxide is not a specific, I *do* claim that it accomplished the most good, and at the same time has absolutely *no* objectionable qualities, which latter remark is applicable to very few germicides. I most heartily endorse the statements as to its advantages as made by Dr. Bloodworth, of Philadelphia, namely, that it checks the growth and increase of the bacilli, and is "non-irritant, colorless, odorless, tasteless, and causes no pain." I also believe with Dr. Greig, of Toronto, that it prevents the production and absorption of the poison, "and that it has the property of oxidizing many organic compounds"; also that it undoubtedly acts as a solvent upon the membrane.

The plan that I have found most satisfactory for the application of these agents is: First, spray the throat with the hydrogen peroxide; this is to be followed in one hour by the application of a 5 per cent. solution of oleate of mercury—the application being made with a camel's hair pencil. This plan is continued throughout the entire course of the disease—the hydrogen peroxide being alternated every hour with the oleate of mercury.

While oleate of mercury possesses many of the properties

for which we would use the bichloride, it is not irritant like the latter, and is practically harmless when used in the strength above mentioned.

As to the internal administration of remedies, the practitioner must be guided by circumstances and his own good judgment. With the exception of stimulants, there are *no* medicines that I would particularly recommend for internal administration. While iron, so extensively used at present, may be of benefit, I fail to see the indications for its use, and have but little faith in its reputed worth.

The careful support of the patient's strength by the judicious administration of liquid food is as indispensable to successful results as is any part of the treatment. Our most valuable ally in this line is milk. If the child rejects food and offers forcible resistance to its administration, then it must be nourished per rectum.

When the pseudo-membrane has extended to the nares, we have to cope with the disease under more difficult conditions. In this situation, owing to the greater extent of mucous surface exposed, there is a more extensive field for the absorption of the poison. Under these conditions it is very necessary to keep the passages clean and thus prevent, as far as possible, the absorption of the poison. For this purpose, Loomis recommends the nasal douche, with a fountain syringe, using a 1 per cent. solution of carbolic acid.

In closing, I would say that, while entertaining the greatest respect for the opinions of the gentlemen whose reports have occasioned the writing of this paper, I repeat that I have been actuated only by a desire to find a true explanation of opposite results obtained by different practitioners pursuing the same treatment. Rather than trying to teach, I am seeking to be taught.

Wm. R. Warner & Co's Parvules are the *ne plus ultra* of medicines, as far as our present knowledge goes.—F. W. JONES, M. D., Ipswich, New Hampshire.

ART. II.—Puerperal Infection—Its Etiology, Prophylaxis and Treatment.*

By WILLIAM R. HOWARD, M. D., of Fort Worth, Tex.

Two theories are now held as to the *etiology of puerperal infection*—one, that it is due to a poison produced by microbes, coming from without and lodging in the wounds of the genital canal; the other, that it belongs to a class of zymotic diseases, and is not the consequence of local lesions; yet specific in character, and as distinct as typhus, typhoid, or relapsing fevers.

From a clinical point of view, according to my position, puerperal infection is not a specific process, but a form of infectious wound disease, produced in all cases by the action of living ferments, which may be developed directly, by destruction of tissue or mechanical obstruction; or, indirectly, by the production of leucomaines, with the resulting toxic effect of these animal alkaloids.

Puerperal women are more liable to disease than the non-puerperal. During pregnancy there is a general increased amount of the circulating fluid in the blood-vessels; it is more watery, and the coloring matter, albumin, fat, phosphorus and iron are less than in the non-pregnant condition. During pregnancy, there is an increase of fibrin; this increase in leucocytes and this surplus fibrin predispose to inflammatory diseases. The left ventricle becomes hypertrophied, the walls of the vessels thickened, and their calibres increased. To keep pace with the development of the fœtus, the muscular tissue of the uterus grows; the slower movements of the nourishing fluids in the blood-vessels and lymphatics may give rise to thrombi, which may incite inflammation, or become a means of infection; and thus many other conditions in pregnancy predispose to unfavorable complications in childbirth.

After labor, the patient is exhausted. Childbirth causes tears and abrasions, which are liable to become the seats of

*Read before the North Texas Medical Association, in session at Fort Worth, Tex., December 14, 1892

infection. The uterine sinuses are closed by thrombi, immediately after expulsion. Before labor, there was a strong current in the direction of the uterus; after expulsion, the current goes inward. The lochia contain debris from the parturient tract, and may become a nutrient media for the culture of micro-organisms.

Crowded lying-in wards increase the danger of infection. If one patient is attacked, others are endangered, as cleanliness becomes more difficult. The presence of suppurating ulcers on patients in the lying in room, the services of nurses who attend surgical wards or puerperal cases, the use of unclean instruments, the presence of physicians who are attending infectious diseases, students from the dissecting room, etc., augment the dangers of infection. The most frequent time of infection is during manipulations of delivery, without antiseptic precautions.

The direct cause of infection is the microbe. Microbes are not found in healthy human tissues—they are not capable of self-production or spontaneous generation. Therefore, their presence in disease indicates that they must come from without and find suitable conditions in the abrasions, etc., for development. Many micro-organisms are productive of puerperal infection—though no simple organism, or special living ferment, can be held responsible for this disease.

It is claimed by good authority, that pathogenic bacteria form in the vagina in health; and by others, that the innoxious bacteria found in the vagina, become noxious in the presence of the proper media. But this is denied by careful observers, who declare that the experiments were not conducted in a manner to warrant such assertions; and it is an accepted theory that bacteria do not change their nature except under the most unusual conditions.

In the production of these affections, several conditions are necessary, all of which are fulfilled in the one under consideration—puerperal infection. The first requirement is a channel of entrance; second, a receptive condition; and, third, an active poison, capable of producing results.

The first two are already present. Here we have, and unavoidably so, conditions most favorable to the entrance and activity, with their disastrous effects, of bacteria and their products; lesions permitting their entrance, and the depression of vital energy allowing them to multiply afterwards.

The products of pathogenic bacteria are their animal alkaloids—called *ptomaines* and *leucomaines*. In 1872, Selmi gave the name of *ptomaines* to the alkaloids obtained in the putrifying cadaver. Since then it has been shown that these animal alkaloids also form in the living organism, and as physiological products of the living cell; these last are called *leucomaines*.

As vegetable cells produce vegetable alkaloids—quinine, morphine, etc.—so animal cells produce animal alkaloids—*ptomaines* and *leucomaines*—which are more or less toxic in character.

Having found that a majority, if not all, of our infectious diseases are produced by micro-organisms, a search is made into the action of these destructive bacteria. Pathological changes result in two ways—mechanical disturbances by the micro-organisms themselves, or the noxious results following the fermentations set up by them. The actual mechanical effects of the organisms themselves are but few, compared with the effects of their products—ferments and *leucomaines*—as evidenced by clinical observations, thermometric changes, physical and mental disturbances and the interference with the general bodily functions; these show that the tissues are the seat of chemical changes produced by these living ferments. Again, Brieger says that pathogenic bacteria produce chemical decomposition in the animal body in two ways—first, by taking for their own use elements which are of importance to, and necessary for the nutrition of the animal economy; second by producing in the tissues which they infiltrate, fermentations which result in the separation of certain toxic products of complex character. In other words, they give rise in the animal organism to products of putrefaction—

it is this which brings on death, and which gives rise to the cadaveric alkaloids, as well as the alkaloids found in the fluids during life.

The name *enzymes* is applied to special or soluble ferments elaborated by microbes. Some organisms produce both a ferment (enzyme) and an alkaloid. And the immediate cause of an infectious disease may be due to the organism, its ferment or the alkaloid produced by it—either to one or all of these acting together; or, they may each produce different symptoms, and the sum of these different symptoms will characterize the disease.

These compounds, so powerful in their toxic action, are, to a certain extent, limited in their action, as their instability renders them liable to break up into simple and more harmless, and even, in some instances, inert compounds. This is due to, and assisted by, the continued oxidization going on in the living, and by the presence of animal heat, which is another factor in producing a change in these ferments and alkaloids.

Thus we find that both living and dead tissues are the factories of poisons of great virulence; that in the dead tissues these poisons are produced by micro-organisms, while, in the living tissues, they are produced by the vital activity of the cells themselves, or of the bacteria among these cells. The production of these toxic substances during life is harmless, in direct ratio to their obstructed excretion and increased production. They produce poisonous symptoms as soon as their excretion is interfered with, or their production is abnormally increased. The first of these conditions may occur from various causes, and both increased production and obstructed excretion may and do occur upon the entrance of bacteria into living tissues and their development there; and this is precisely what occurs in infectious diseases, especially in those of a septicæmic or pyæmic nature.

A few words on *prophylaxis and treatment* in conclusion. We should use the utmost antiseptic precautions in the lying-in room; we must thoroughly cleanse ourselves and

change clothes in going from the presence of infectious and contagious diseases, such as diphtheria, scarlatina, erysipelas, etc., to the lying-in room. The patient should be cleansed, especially the external genitals and adjacent parts; the bed should be clean, as well as everything used during the conduct of labor. Lubricants—soap, oils, fat, glycerin, etc.—should be avoided as unnecessary and dangerous. The hands, dipped in a solution of bi-chloride of mercury, 1: 2000, is all that is necessary. Do not introduce the examining finger deeper or oftener than necessary to ascertain the degree of dilatation of the external os and to determine the presentation, and this ought to be done without entering the womb at all.

After a normal labor, the finger should not be introduced into the vagina, for obvious reasons. Too great haste to remove the placenta often induces tension of the cord; this is wrong. While the placenta is being expelled, it may be turned slowly, so as to twist the membranes into a rope, the better to insure their entire expulsion. If any portion of the secundines be left in the uterus, the hand should be thoroughly cleansed before any attempt is made toward removal. Intra-uterine injections or douches should not be used, except where the finger or hand or instruments have been introduced into the uterine cavity; then a 1: 3000 to 1: 4000 bi-chloride of mercury solution, at a temperature of 110° to 115° Fahr., is best. A fountain syringe, with not over a foot elevation above the fundus uteri, will give the necessary force. A return-flow instrument is best, though not necessary, as the cervix is always well open, and the water passes out easily. After the injection, the fluid should be expelled from the uterus, and the vagina thoroughly cleansed. After the patient has had a little rest after the expulsion of the placenta, the clotted blood should be removed from the pubes and external genitals, and the parts washed in a bi-chloride solution, 1: 2000. As there often comes a little gush of blood after the expulsion of the placenta, it is well to wait from half an hour to an hour before this cleansing process is begun.

In dressing the external genitals, pledgets of absorbent cotton are to be used for the vulva, and clean muslin rags for the skin. These are wrung out of a bi-chloride solution and carefully applied, and changed every four to six hours—oftener if the patient has a movement or passes urine. Before the fresh dressing is applied, the parts should be irrigated—no injection; the genitals must not be touched. It is well to use a bed-pan or clean cloths, which are to be removed after the irrigation. When it is convenient, an occlusion bandage may be attached to the binder at the sides, and carried under the thighs and fastened in front to secure the dressing. Where this is done, sufficient cotton batting or clean linen is used to make the patient comfortable. This dressing of the genitals, it is argued by some, is superfluous, but it is just as rational to protect the genitals and parturient tract with occlusion antiseptic dressing as it is to dress any wound after an operation or injury. The open-wound treatment is now a thing of the past. Better have no dressing, however, than one not thoroughly antiseptic.

As a rule, I give a teaspoonful of fluid extract of ergot as soon as the uterus is entirely empty, as I consider a good contraction of the uterus a great protection against puerperal infection.

It will be impossible here to give more than a general outline of *treatment of puerperal infection*. The temperature should be controlled; where it runs high, ice-bags may be employed. Washing out, antiseptically, the uterus, in the earlier stages, is of much importance. At the first appearance of the fever, if we have reason to believe that it is caused by the presence of clots or fragments of the secundines, we may, with great caution, with a blunt curette, scrape out the uterus; but, after the inflammation has extended to the tubes, ovaries, peritoneum, etc., it is worse than folly and positively dangerous. What good can come of these intra-uterine manipulations when there is pus in the tubes and abdominal cavity? Quinine should be given in four to six grain doses every four to six hours, and

opiates to relieve pain and cause sleep. Nothing is usually needed to move the bowels. If they do not move spontaneously, occasionally an enema may be given, or glycerin suppositories inserted. If a great amount of flatus be present, an enema of soap, turpentine and water may be given—soap and turpentine each a teaspoonful previously mixed, to form an emulsion, and added to a half gallon of water, as hot as can well be borne.

Each case has its individual symptoms, and must be treated as these indicate. We may have local inflammations in the vagina, diphtheritic patches, etc., or we may have metritis, endometritis, pelvic cellulitis, peritonitis, or phlebitis, and many other complications. Each of these variations require a special line of treatment directed to meet the indications.

ART. III.—Foreign Bodies in the Eye

By S. LATIMER PHILLIPS, M. D., of Savannah, Ga.

Every practitioner will be called upon more or less often to treat foreign bodies of various kinds lodged in the different eye-coats. While many of these, from their situation and difficulty of removal, will be turned over to the care of the specialist, as being more expert in such matters, still a certain percentage will have to be looked after by the general practitioner himself, and he should be prepared for such emergencies.

THE CONJUNCTIVA.—Many of the most common cases coming to the physician for relief, will be those in which the foreign body has lodged somewhere in the conjunctiva. In a large percentage of cases, where a cinder is the cause of the trouble, having generally been blown into the eye while travelling, it will be found lodged in the conjunctiva lining the upper lid, where, with every movement of the eye or lid, it scratches the sensitive ball and produces those symptoms of intense irritation found in these conditions. It is just here

that many mistakes of diagnosis are made, for the word of the patient cannot always be depended upon. Too often the physician gives various kinds of collyria for what he supposes to be a form of conjunctivitis, which it really is, but which will never get well until the offending particle is removed—notwithstanding the employment of all the collyria at his command. It should be the rule invariably to evert the upper lid and examine the conjunctiva there, as well as that below, that comes under one's care, unless the symptoms present can be clearly attributed to some visible cause. This little operation can be quickly and easily done by asking the patient to look to the floor, the lashes being grasped between the forefinger and thumb of the left hand, and the lid pulled away from the eye-ball, and downward pressure is made with penholder or pencil, just back and above the supra-edge of the tarsal cartilage. The lid is thus easily pulled up, and the conjunctival surface exposed to view. The foreign body will usually be seen sticking to the palpebral conjunctiva, and with a twist of a silk or soft linen handkerchief, easily removed. It is good advice to give people when travelling by rail, upon getting a cinder in the eye, to take hold of the lashes and pull lid away from eye-ball, at the same time moving it up and down for a few times, and then bathe eye in cold water. The movement of the lid will loosen the particle and bring it down, so that when the eye is bathed, it is easily washed out from the conjunctival sac.

Frequently, we have all the symptoms of foreign body in the eye, but, upon inspection, we do not find it, though there may clearly be traces of its having been there in the enlarged conjunctival vessels, which, in themselves, give rise to the scratching sensation which the patient complains of, and which is easily relieved by dropping into the conjunctival sac a few drops of a solution of cocaine. People should be warned, upon getting pieces of sand, coal-dust, etc., in eyes, not to rub them, as it only fixes the offending particle more firmly in the tissues, but to try and remove it by the

above method, and if unsuccessful, go immediately to a physician.

I cannot speak too forcibly against the pernicious custom of introducing one foreign body in the eye to drive out another, such as flax-seeds, eye-stones, etc.

I remember, when a boy, seeing a case of misapplied zeal in this respect, which made a lasting impression upon me. A young cousin, coming on from New York to visit us, got a piece of coal-dust in his eye while on the train, and when he reached our house, was suffering very much. One of the lady members of the family, in the hope of relieving his suffering, went in search of a flaxseed, which she had heard was the best remedy under such circumstances. Upon her return, she put in his eye what she supposed was a flaxseed, but which turned out to be a seed very much more fiery—that of a red pepper—much to the regret of the patient, who showed his appreciation by his wild antics.

Harlan, of Philadelphia, in his little book, "Eyesight and How to Care for It," mentions a case of a woman in whose eye a flaxseed had been put, some time before, to drive out the foreign body. When she came to the Clinic, the lids were swelled, and from between them came a profuse discharge. The flaxseed was found in the cul-de-sac, having sprouted. The eye was destroyed through ulcerative keratitis.

It is surprising what large foreign bodies sometimes lodge in the conjunctival sac without doing harm to the eye-ball.

A few months since, a little girl, six years of age, was brought to me from the country. She came in with the right lids enormously swelled, and the eye entirely closed, there being a profuse purulent discharge. The eye was so painful that I could not get a look into it, and the right eye was closed, she being led about by her parents. Her mother stated that two days before she had stuck something in her left eye while jumping a ditch. I did not get a look at the eye until she was fully under the influence of chloroform. I expected to find the eye-ball very much injured, and was surprised to find it unhurt. Upon opening the lids, near the outer canthus, in the sac, I found two dark bodies, partially covered with pus, which, when I pulled them out, proved to be splinters of wood fully half an inch

in length. I also found two flax seed, which the mother acknowledged to have put in to drive out the splinters. A good recovery was made.

Sometimes the foreign body may be forced under the conjunctiva. Such a case I saw only a few days since.

Mr. W., a young civil engineer from South Carolina, employed in surveying one of the new railroads in that State, while going through a thicket of very tall rushes, got something in his left eye. His companions searched for the offending particle, but could not find it. When he came to me, I saw in the conjunctiva, midway between the outer margin of the cornea and inner canthus, a small focus of congested vessels, a slight swelling of the conjunctiva, and a fluid discoloration, probably due to some dark color object under it. This I presumed to be the situation of the foreign body. After the instillation of a few drops of cocaine in the cul-de-sac, the conjunctiva was lifted over the spot of discoloration, and, with fine knife-needle, opened. I then easily drew out the offending bit, which proved to be the lance-shaped point of a swamp-rush. The sharp point had been driven under the conjunctiva and broken off sharp, it being dry and brittle at this season of the year.

Grains of gunpowder sometimes become embedded in the conjunctiva, and while they do no harm, patients, for cosmetic reasons, will naturally want them removed. This is best done by lifting the conjunctiva containing the powder with fine mouse-tooth forceps and cutting it out bodily. The small wound heals without difficulty.

THE CORNEA.—Owing to its very prominent position, the cornea is a frequent lodging-place for foreign bodies. Small pieces of iron, steel, and flying particles from the emery-wheel, become embedded in the corneal tissue. These, together with small particles of dust, in whirlwinds which we so often see about street-corners, and cinders, are the most frequent. Sometimes it is with difficulty that we can detect these small pieces of offending matter in the cornea. The whole corneal surface is to be searched carefully, by directing the patient to move his eye in various directions; sometimes by making the patient face a bright window, the foreign body can be easily found and removed; but usually a

bi-convex glass for focussing the light is best. This also magnifies, and helps in determining whether the operation has been completely done. A little instrument I find very useful for this purpose is the ordinary glass used by the jeweller, but with a head-attachment, which consists merely of an ordinary spring wire-band, partially encircling the head. This instrument I saw used first by Dr. Julian J. Chisolm, of Baltimore. At times, we can best locate the body by using the ophthalmoscope—the particle showing dark upon the red reflex from the fundus.

Some have used a solution of fluorescein to discover the foreign body. This solution does not affect in any way the healthy portion of the cornea, but stains a light green the abraded surface. I have never had occasion to employ it.

A foreign body, when left alone in the cornea, will finally come out, after the suppuration of the surrounding tissues has loosened it; but very few people are willing to wait for this slow process of nature when competent aid can be had.

Not long since, a negro man, 65 years of age, came to me with a foreign body in his left cornea, which he got in there two months before, while lying on the ground under the shade of a tree. While looking up into the tree something dropped into his eye. Off and on after that, the eye has felt weak, especially so when he went out on the water, or was exposed to a bright light. The eye became red, and at times painful. On same eye was a pterygium, its apex extending just beyond the corneal margin, and its base reaching to the inner canthus. This growth has been on the eye for sixteen years, but has not developed much in the last few. The foreign body, which proved to be a hard piece of tree-bark or shell, about the size of a large pin-head, was embedded in the cornea, just below the pupillary margin, and a little to the inner side. Extending from the apex of the pterygium to the ulcer, in which the foreign body was now situated, was a curious sprout of little superficial blood-vessels, which evidently carried nourishment to this portion of the cornea.

What a wonderful provision of nature to keep life in the parts! Here we have a foreign body impinging upon the

corneal surface, and by its presence interfering with the delicate circulatory system of this tissue. It begins to die for want of nourishment, and then we see a life-line thrown to the languishing part in the shape of a little vessel, which comes from the pterygium with its own supply of blood, and continues to bring nourishment until the part is thoroughly repaired, when it slowly disappears.

Galezowsei (*Traité des Maladies des Yeux*) mentions a case somewhat similar. His was a woman 52 years old, who had the chaff of a millet seed in her eye for one year. She suffered but little, although at times the eye was red and sensitive to light. Around the little tumor was a distinct circle of blood vessels, and after removal of the chaff there was found another circle within the depression of the cornea, from which the foreign particle had been taken, communicating with the other circle.

In countries where much wheat and other small grain are grown one often sees eyes into which the chaff and the long, stiff, wiry beards have gotten. These penetrating injuries to the cornea are apt to result in stubborn inflammations or ulcers, suppuration taking place freely, to be checked only by the most stringent methods, such as galvano-cautery, etc.

When superficial, foreign bodies can be easily picked from the cornea with an ordinary needle, used to divide the lens capsule—now that we have cocaine, that great boon both to oculist and patient. The patient should sit facing a bright window, with his head resting upon the breast of the operator, unless there is an oculist chair handy. The surgeon holding the lids apart and steadying the eye with the finger of his left hand, causes the patient to move the eye around until that position is found where one gets the best illumination, and then get him to fix his eye upon some designated spot, and keep it there. By so doing the offending particle can usually be removed with the greatest ease. This operation, which since the introduction of cocaine in ophthalmic practice has become so simple, used often to be most trying to the patience of the operator and the nerves of the patient. In spite of everything the operator could do, the

eye, entirely beyond the control of the patient's will, would roll from side to side at every touch of the knife, and as a result the eye would be much bruised. Frequently the operation could not be completed until the patient had been put under the influence of chloroform. But now, thanks to cocaine, all that has been done away with, and everything is made easy for the operator and operated. Of course, for young and nervous children, who might move at a very inopportune time, and thus cause much harm, anæsthetics will still be required. The staining which comes from the reception of hot iron in the cornea can easily be dug out and what remains will do no material harm. It is when the foreign body pierces the outer layers of the cornea, and lies near or on Decimet's membrane, that the operation of removal becomes serious. Here is the danger of having the bit of foreign substance fall into the anterior chamber on attempts at removal. To guard against this, a flat, broad needle will have to be plunged into the anterior chamber, near corneal border, and carried up back of the body, to thus press it forward. The entrance through the cornea of the foreign body can be now enlarged, with a knife and a small forceps introduced to draw out the offending particle.

FOREIGN BODIES IN THE INTERIOR OF THE EYE—THE ANTERIOR CHAMBER.—If the bit of iron or steel should get into the anterior chamber, paracentesis should be done at the lower border of the cornea, and perhaps the foreign body may come out with the escaping aqueous. If not, a fine forceps should be introduced, the body seized, and withdrawn.

THE LENS.—Sometimes small bits of iron, etc., pass through the cornea and lodge in the lens, where they can be seen by focal illumination or with an ophthalmoscope. Usually the lens becomes opaque, and at times is perfectly absorbed.

When the case is seen before the lens becomes opaque, and the foreign body hidden, attempts may be made to remove it. Dr. Webster reports the removal of a small piece of steel from the lens with partial preservation of vision,

in the August number of the *American Journal of Ophthalmology*, 1886.

The patient came to see the late Dr. Agnew, and in his absence Dr. Webster operated. The man was 51 years of age, and had gotten steel in eye while striking a chisel with hammer, a piece of the former breaking off, flying into the eye and transfixing the iris and lens. Six days after the accident, under ether, the steel was removed. First an incision was made in the cornea, through which a delicate pair of forceps was introduced, and the encapsulated body removed, with conscious force. Two weeks later the patient was discharged without having any undue reaction follow the operation, and with vision $\frac{20}{60}$. A blood stain covered the capsule, in the area of the coloboma, a small piece of iris having been removed with the foreign body.

THE VITREOUS CHAMBER.—When pieces of iron, stone, glass, etc., gain access to the vitreous chamber, and lodge there, whether in the vitreous body itself, or some of the eye coats beyond its limit, it becomes a very serious matter; they may not only cause blindness in that eye, but through sympathy, inflammation in the fellow, resulting in total blindness. They make their entrance through the ciliary region, and back of it through the sclerotic, or having penetrated the cornea and lens, lodge in vitreous, choroid, retina or optic papilla. If the case is immediately seen after injury, it is very probable that the opening through which the fragment made its entrance will be discovered, unless it be exceedingly small; and if there has been no hæmorrhage, its presence and position may be recognized with the ophthalmoscope. The course it has taken can be followed up sometimes by the hazy track it leaves in the vitreous through which it has made its passage. If there should be profuse hæmorrhage into the vitreous, due to traumatism of the choroidal vessels, nothing can be made out until the hæmorrhage has been absorbed. Of course, if the body at the time of entrance is not aseptic, more or less inflammation will develop. It may be circumscribed and result in encapsulation of the body, or it may go on to panophthalmitis, with complete destruction of the eye, and involvement through

sympathy of the other. When a small particle becomes encapsulated, it may remain quiescent in the eye for a long time. But as long as it remains, the eye is exposed to more or less risk.

Mr. W. A. Frost (*Ophthalmic Surgery*, Carter and Frost, page 371), mentions as occurring in his practice the case of a man 18 years old, while working on a block of hard wood with chisel, a particle of the latter flew off and struck his eye. He went to Morefield's for treatment, but as there was some talk of enucleation, he was frightened off. The following day Mr. Frost saw him. The piece of steel had made its entrance into the eyeball through the sclerotic just back of the ciliary region, about half way between the horizontal and vertical meridian. It did not strike the lens. It could be seen with the ophthalmoscope sticking in the sclerotic on the opposite side. The piece of steel was a millimeter in length, and projected about a millimeter from the sclerotic. There was no pain, or conjunctival irritation, and very little visual disturbance. Not having a sufficiently powerful magnet, the patient was told to return on the next day, which he did, and at which time it was found that the fragment had been obscured by an outpouring of lymph. Nothing was done, and fourteen months afterwards the patient was seen and found to have normal central vision—the blind spot left behind by the injury only being found on very careful examination with the perimeter. The position of fragment was still the same, but the nature of it could not be made out precisely. It was surrounded by a small circle of choroidal atrophy.

When a foreign body has entered the eye, the question is whether it can be removed and vision to a lesser or greater extent preserved, or whether the whole eye will have to be sacrificed. When the body has been a large one and the component parts of the eye so disorganized that there is no chance of the eyeball retaining its normal shape, regardless of vision, one will, by enucleation, save the patient a long course of suffering and much loss of time. When there is a possibility of saving the shape of the eyeball, and even a little vision, the foreign body should be sought for, and attempts made to remove it. This can best be done when the body is small and situated near the sclerotic. When the position of the foreign body has been located by the oph-

thalmoscope, a small opening is made through the sclerotic over the offending portion, and its removal accomplished with small forceps. Some use a small scoop for getting it out.

When the foreign body is a piece of iron or steel, the electro-magnet is of the greatest use. McKeowan was the first to use this method with success. Perhaps the electro-magnet of Hirschberg is best known. Dr. Gruning, of New York, has devised one which is more or less used also. It has been said that one can recognize the situation of the piece of iron by passing the magnet over the eye surface, and when it is directly over the iron, pain in that place will be experienced, by the iron being attracted to the magnet. Of course in using the magnet, it must be employed before encapsulation takes place.

Dr. Samuel Theobald (*Maryland Medical Journal*, December 10, 1892,) reports a case where a piece of steel was removed from an eye eleven days after injury with an electro-magnet. One month afterward vision in the injured eye was $\frac{16}{xxx}$, and continued to improve.

If the opening of entrance is not sufficiently large to admit the point of magnet, it can be enlarged with a knife. In introducing the point, it is best to go in a straight line and much delicacy of handling employed; otherwise the vitreous will be so obscured as that there will be practically little sight. Even under the most favorable circumstances, one must not expect too much in the way of vision, frequently being satisfied with the preservation of the shape of the eyeball. After the acute symptoms have passed away, shrinking of the vitreous and pulling of the cord-like bands which form, will result in detachment of retina. Of course, if failure to get the iron with the magnet results, enucleation will have to be resorted to. The bit of metal may become stuck in the optic papilla, without causing irritation, as was the case occurring in Dr. Noyes' practice (*Diseases of the Eye*, page 485.) A man got a bit of iron in his eye three months

before, and the eye made a good recovery. A second fragment had penetrated the same eye. Dr. Noyes proposed to use the magnet to search for and if possible remove the two pieces, but with the understanding that if only one or more was removed, the eye should be enucleated. Only one none was found, and the eye was taken out. After a long search the other piece was found sticking in the optic papilla, encapsulated. It was believed that this was the first piece, which had remained in the eye for three months without causing irritation of the fellow-eye.

Of course, in doing these operations upon the eye, antiseptic precautions should be carefully observed.

ART. IV.—Laparotomy in Shot Wounds of the Abdomen.*

By JAMES KERR, M. D., M. Ch., of Washington, D. C.,

PROFESSOR OF SURGERY, UNIVERSITY OF GEORGETOWN; SURGEON TO EMERGENCY HOSPITAL, AND CENTRAL DISPENSARY, AND TO PROVIDENCE HOSPITAL, ETC.

Baudens, of France, was probably the first to lay the abdomen open in a case of penetrating shot-wound. In 1836, he opened the abdominal cavity, resected eight inches of the small intestines, and united the edges with Lembert suture. The patient died on the third day; but at the autopsy a wound of the cæcum was discovered, which had not been noticed at the time of the operation. His second case was a wound of the transverse colon. The wound of entrance was enlarged, the intestinal wound secured by sutures, and the patient recovered.

In 1871, in Circular 3, War Department, S. G. O., p. 87, Assistant Surgeon, George A. Otis, U. S. A., advocated the operation in the following words:

“For one, I am free to assert that where there is evidence that internal hæmorrhage or fæcal extravasation is going on, what may be termed the “ostrich plan” of giving opium

* Read at a meeting of the Medical and Surgical Society of the District of Columbia on December 12, 1892.

and making the patient comfortable, should be abandoned ; and I believe that prejudices similar to those that ovariectomy has successfully overcome in the last quarter of a century, will be dispelled by the results of exploratory incisions in gun-shot wounds of the abdomen before many years have elapsed."

In a paper by Dr. Hunter McGuire (now President of the American Medical Association), before the Medical Society of Virginia, 1873, commenting on this very report, after reporting some of his experiences under the expectant plan, he most cordially endorsed the suggestion of Dr. Otis.

In 1882, T. N. Fitzgerald, of Australia, performed laparotomy on a young man who had wounded himself with a shot-gun loaded with small shot. Dr. Fitzgerald resected ten inches of jejunum, cut out a piece of mesentery, sutured the edges with carbolized cat-gut, and washed out the cavity. The patient died of peritonitis one hundred and twenty-three hours after the operation.

Dr. Kinloch, of South Carolina, performed laparotomy for pistol-shot wound of the abdomen in 1882; the patient died, and the autopsy showed two additional wounds not noticed at the time of the operation.

Prof. Kocher, of Berne, had a successful case in 1883. This was followed in 1884, by Bull, of New York, and Surgeon-General Hamilton. These successful cases brought the operation of laparotomy for gun-shot wound of the abdomen before the surgical world, and it has now, I think, become a recognized and legitimate procedure.

Whatever advantages can be claimed for the operation, as evidencing an advance in modern surgical practice, belong mostly to American surgeons, and we are more indebted to Dr. W. B. Coley than to any other writer for collecting the statistics of this operation and reviewing its results, to enable us to come to a decision as to what should be done in penetrating shot-wounds of the abdomen. To my mind, these statistics justify the operation.

Seventy-four (74) cases of laparotomy have been collected by Dr. W. B. Coley, in the *Boston Medical and Surgical Jour-*

nal of October 18th, 1888, p. 375, up to the year 1888. Of these, 29 recovered; 44 died; 1, result unknown, giving 39 per cent. of recoveries.

Since then, I have tabulated forty-nine other cases, which I present in tabular form. Twenty-six recovered, and 23 died; showing a percentage of 53 recoveries—a significant improvement in these later cases. This brings the record up to April, 1892, with my case just reported.

On the other hand, Reclus and Nogués, French surgeons, have, in the *Revue de Chirurgie* of February last (quoted by Coley), at great length, and by exhaustive arguments, based on their own statistics, advocated the expectant plan or non-interference; but I think Coley has shown that their conclusions were based on too meagre data to justify such sweeping assertions; and my figures go to show a distinct improvement in later cases. The practice, at the present moment, judging from the frequency of reported cases, would indicate, at any rate, an increased tendency to interfere.

My first case of gun-shot of the abdomen made a very strong impression on my mind at the time, occurring, as it did, in the person of a very dear friend fifteen years ago, when I had the mournful experience of sitting helplessly by his bedside (supported, as I was, by the best and most experienced surgical skill in that part of the country), and watching him die. The bullet had penetrated the wing of the ilium, passed into the abdominal cavity, perforating two and grazing several other loops of intestine, and apparently dropping back beside the spinal column without doing any further damage.

The patient died, four days from the time of the accident, of peritonitis; and when his abdomen was opened, several pints of bloody serum were found in addition to the above injuries, but no fæcal extravasation was observed.

From the light that recent practice has thrown on such cases, we cannot doubt but that if the abdomen had been opened and washed out, even without intestinal suture (as, at the time of death, the intestinal lesions had become occluded by plastic adhesions), he would have recovered, and a valuable life would have been saved.

SHOT-WOUNDS OF ABDOMEN—LAPAROTOMY.

NO. OF CASE.	OPERATOR OR REPORTER.	DATES OF INJURY.	PATIENT AND INJURY.	TREATMENT.	RESULT.	REFERENCES.
1	Barrow, D.	July 28, 1888.	M. K., aged 31, 44-calibre pistol ball entered one-half inch to left and one-half inch below umbilicus; portion of omentum projected.	Four hours after injury, incision in median line, 1 st long, between umbilicus and pubis; 7 ragged perforations found in intestine; mesenteric wounded in five places; perforations closed with Czerny-Lembert sutures; mesenteric vessels ligated.	Died in three hours.	Jour. Amer. Med. Asso., 1889, XII, 833.
2	Barrow, D.	Nov. 6, 1888.	D. J., aged 25, ball entered one inch below and three inches posterior to the left anterior superior spine of ilium, passing from below upwards and from left to right.	Incision, four hours after injury, from a little below ensiform cartilage to umbilicus; nine perforations found in small intestine; branch of superior mesenteric found bleeding and ligated; six perforations were sutured; three were excised and ends united by Czerny-Lembert sutures.	Died fifteen hours after operation.	Jour. Amer. Med. Asso., 1889, XII, 833.
3	Barrow, D.	Dec. 25, 1888.	D. J., aged 28, ball entered two and one-fourth inches to left and below umbilicus.	Incision in median line, four inches long, six hours after injury; no injury found in intestines; cavity sponged, and incision sutured.	Recovered.	Jour. Amer. Med. Asso., 1889, XII, 832.
4	Barrow, D.	Ap'l 22, 1889.	J. J., aged 25, ball entered one-half inch below ensiform cartilage and one and one-half inches to right of median line.	Cavity opened thirteen hours after injury; blood and bile escaped; ball had passed through right lobe of liver; bile duct cut.	Died April 28.	Jour. Amer. Med. Asso., 1889, XII, 833.
5	Wheaton, C. A.	Nov. 16, 1888.	J. M., ball entered thoracic wall between eleventh and twelfth ribs, one inch posterior to mid-axillary line; peritonitis on second day.	Laparotomy forty-eight hours after injury; found loss of substance of colon, and right kidney injured.	Died.	Northwestern Lancet, St. Paul, 1889, IX, p. 57-40.
6	Cabot, A. T.	July 3, 1888.	R. E., aged 21, 22-calibre ball entered two inches below and one inch to left of umbilicus.	Vertical incision, about three hours after injury; three inches in length; found puncture in middle of anterior wall of stomach; opening closed by interrupted Lembert's sutures; contents of stomach had not escaped.	Recovered in eighteen days.	Boston Med. and Surg. Jour., 1889, CXXI, p. 81.
7	Harrington, F. B.	Aug. 6, 1888.	W. G., aged 24, one ball entered chest between first and second rib; another in Scarp's triangle; a third one inch below umbilicus, about two inches to the left; bloody urine two hours after injury.	Abdomen opened, and three perforations found, which were sewed up.	Died in four hours.	Boston Med. and Surg. Jour., 1889, CXXI, p. 83.
8	Bell, C. E.	Dec. 30, 1888.	W. P., aged 18, small pistol ball entered abdomen in lumbar region just below ribs on left side; vomited digested food, but no blood.	Abdomen opened in middle line, from about one inch below sternum to two inches below umbilicus; seven perforations found in small bowel; edges of wounded portion of bowel invaginated, and peritoneal surfaces stitched together.	Recovered in six weeks.	British Med. Jour., London, 1889, I, p. 589.
9	Lowe, G. N.	?	Blacksmith, aged 35, wad, with fragments of clothing, driven through abdomen into viscera at short range; entered two inches to left and one-half inch below umbilicus.	Wound enlarged and gut turned out; found one and one-half inch of small intestine destroyed; two inches of gut resected, and ends joined by Lembert's sutures; cavity cleansed; wounds iodoforimized.	Recovered; able to do work in six months.	Med. Standard, Chicago, 1890, VIII, 3.

10	Stimson, L. A.	Dec. 6, 1888.	C. F., aged 27, ball entered midway between umbilicus and ensiform process, one-half inch to left of median line.	Opened, shortly after injury, in median line, from umbilicus to ensiform process; blood and serum issued freely; two perforations found in jejunum, and closed with Lembert's suture; ragged wound in parietal peritoneum; perforation in mesocolon; circular perforation of posterior wall of stomach closed with double row of sutures. Median incision, six inches long, between pubis and umbilicus, seven hours after injury; copious escape of serum; six perforations found in small intestine; bullet imbedded in mesentery; wounds closed with Lembert's sutures.	Died in half an hour.	New York Medical Jour., 1889, L, 449.
11	Stimson, L. A.	Mar. 16, 1889	J. D., aged 37, one ball entered about three and one-half inches above the free margin of the ribs, one and one-half inches to left of median line; another two inches below the borders of the ribs and two and one-half inches to right of median line.	Median incision, six inches long, between pubis and umbilicus, seven hours after injury; copious escape of serum; six perforations found in small intestine; bullet imbedded in mesentery; wounds closed with Lembert's sutures.	Died on Mar. 18	New York Medical Jour., 1889, L, 449.
12	Stimson, L. A.	Ap'l 19, 1889.	Mrs. D. D., aged 28, ball entered two and one-half inches to left of median line and one-half inch below umbilicus.	Abdomen opened, nine hours after injury, in median line; incision seven inches long; ragged opening in small intestine closed with Lembert suture; two wounds in sigmoid flexure closed with single sutures; omentum perforated, but not bleeding.	Recovered; patient discharged June 30, 1889.	New York Medical Jour., 1889, L, 449.
13	Dunn, J. H.	1889 (?)	J. E., aged 23, ball entered left gluteal region and was removed from beneath skin midway between umbilicus and pubes, having passed through pelvic and abdominal cavities.	Abdomen opened, twelve hours after injury, from two inches above pubis to about two and one-half inches above umbilicus; found thirteen perforations of small intestine, three of mesentery, and one of rectum; perforations separately closed by Lembert's sutures. Incision, five inches long, five hours after injury; intestine and omentum pulled out; found ileum perforated; blood washed from cavity; small artery ligated.	Death in eight hours.	Northwestern Lancet, St. Paul, 1889, LX, p. 86.
14	Greenshields, Wm.	1889 (?)	Mrs. L. R., aged 42, pistol ball entered two inches below and to left of umbilicus.	Incision, six inches long from entrance, wound downwards; found perforation of anterior and posterior wall of stomach; sutures applied to both.	Recovered; cured May 20.	Trans. Mich. Med. Soc., Detroit, 1889, XLII, 266.
15	Hickey, R.	Jan. 1, 1889.	Mulatto, aged 22, bullet entered two inches above and one-fourth inch to right of umbilicus.	Incision in median line, from sternum to umbilicus, shortly after injury; copious escape of blood; left lobe of liver and stomach found perforated; wound closed by sutures; abdominal cavity flushed.	Died January 6, 1889.	North Amer. Practitioner, Chicago, 1889, L, 253.
16	Goodfellow, G. E.	Jan. 14, 1889.	R. A. C., ball entered epigastric region at apex of ensiform cartilage, nicking it, and emerged from left side about nine inches from linea alba, and about three and one-half inches above crest of ilium.	Incision through linea alba, one hour after injury; cavity filled with blood and injected matter; four wounds in intestines; mesentery cut in several places; openings in intestine sutured.	Death in eighteen hours.	Southern California Practitioner, Los Angeles, 1889, LV, p. 269.
17	Spohn, A. E.	June 25, 1889	A. B., aged 20, ball entered two inches to left and a little above navel, passed through abdominal cavity, and lodged one inch to left of spine.	Median incision, five inches long, five hours after injury; perforation in stomach, near its greatest curvature; six perforations in small intestine; all perforations closed.	Recovered, and able to do hard work.	Medical and Surgical Reporter, Phila., 1890, LXIII, 596.
18	White, G. A.	Sept. 15, 1889	J. J. G., aged 43, ball entered left hip three inches below crest of ilium, four inches posterior to anterior superior spine.	Incision six inches long, four hours after injury; found four perforations in small and two in large bowel; closed by Czerny-Lembert sutures; reaction slow.	Recovered; nearly well October 10.	Occidental Medical Times, Sacramento, 1890, LV, 666.
19	Barrow, D.	Feb. 8, 1890.	J. G., aged 15, ball entered one and one-half inches to left and on a line with umbilicus.		Recovery.	Jour. Amer. Med. Asso., Chicago, 1890, XV, p. 238.

SHOT-WOUNDS OF ABDOMEN—LAPAROTOMY—CONTINUED.

N. O. OF CASE.	OPERATOR OR REPORTER.	DATE OF INJURY.	PATIENT AND INJURY.	TREATMENT.	RESULT.	REFERENCES.
20	Barrow, D.	July, 1889.	C. D., aged 13, ball entered two inches to right of and one inch below the level of the umbilicus.	Vertical incision, four hours after injury; five perforations—two in ileum, three in cecum—were sutured. Vomiting on third day; abdomen re-opened and irrigated.	Died on third day.	Jour. Amer. Med. Assn., Chicago, 1890, XV, p. 238.
21	Dickinson, D.	Jan. 26, 1890.	J. R., aged 21, ball entered one-half inch below and two and one-half inches to left of umbilicus; urine drawn by catheter found normal; vomiting of gastric mucus.	Incision in median line, from umbilicus to about one and one-half inch above symphysis pubis; found twelve perforations of intestines and omentum; those of the former closed by Lembert sutures.	Died Jan'y 28.	Med. Record, New York, 1890, XXXVIII, 345.
22	Williams, J. H.	Ap'l 26, 1890.	C. W., colored, aged 22, 32-calibre ball entered left edge of umbilical pit; piece of omentum protruded.	Incision four hours after injury; loop of ileum drawn out and found perforated; opening in ileum closed.	Recovered; May 16 goes about with very little tenderness.	Trans. Med. Society of North Carolina, Wilmington, 1891, p. 93.
23	Dalton, H. C.	Aug. 11, 1890	J. K., colored, aged 30, ball entered in left costo-lumbar space, one-half inch above crest of ilium; no shock.	Median incision of seven inches, one hour after injury; cavity full of feces and blood. On fourth day acute pneumonitis of left lung.	Recovered; well Dec. 29, 1890.	Trans. Med. Assn. of Missouri, Kansas City, 1891, p. 129.
24	Dalton, H. C.	Jan. 9, 1889.	J. F., colored, aged 25, call entered sixth intercostal space two inches to left of sternum, passed through diaphragm into abdominal cavity.	Median incision, six hours after injury; two perforations in stomach; blood and food in cavity washed out. Fell from a narrow bed on fourth day, when doing well, striking his abdomen.	Died in twenty-two hours after fall, which had torn open wound in stomach.	Trans. Med. Assn. of Missouri, Kansas City, 1891, p. 129.
25	Dalton, H. C.	Oct. 6, 1890.	T. H., aged 19, 44-calibre ball entered in seventh interspace in right mammary line.	Abdomen opened from ensiform cartilage to umbilicus, four hours after injury. Fluid and clotting blood washed out; ball had passed through right lobe of liver.	Recovered Nov. 6, 1890.	Trans. Med. Assn. of Missouri, Kansas City, 1891, p. 129.
26	Dalton, H. C.	(?)	W. C., aged 26, shot in left lumbar region.	Incision four inches long in left linea semilunaris. Hole found in colon. Feces and blood washed out.	Recovered.	Trans. Med. Assn. of Missouri, Kansas City, 1891, p. 129.
27	Winternute, J. S.	Oct. 5, 1890.	E. C., aged 21, shot in back; ball entered one and one-half inches to left of spine; struck second lumbar vertebra, and passed through abdominal cavity.	Median laparotomy, eight hours after injury; ileum perforated seven times.	Died.	Occidental Medical Times, Sacramento, 1890, IV, p. 471.
28	Patterson, W. H.	Dec. 27, 1891.	P. H., aged 26, ball entered six inches below left nipple; during the twenty-four days following he was at times violently delirious, and almost continuously under the influence of opium; abdomen became much distended.	January 16, 1892. Cavity opened by incision five inches long, from free margin of lower rib towards crest of ilium; cavity full of pus; stomach intolerable; severe hæmorrhage from some vessel threatened to prove fatal; bleeding stopped by hot water; cavity flushed.	Recovered.	Occidental Medical Times, Sacramento, 1892, VI, 118.
29	O'Brien, J.	June 4, 1891.	Mrs. K., aged 24, ball entered four inches to right of and on a level with the umbilicus, passing slightly downwards.	Vertical incision through wound, two hours after injury; peritoneum and omentum found perforated; no other viscus injured.	Recovered.	Indian Med. Gaz., Calcutta, 1892, XXVII, 9.

80	Gage, H.	July 5, 1889.	F. M., aged 15, wounded by a toy pistol in right hypochondrium, two inches from median line and one inch below margin of ribs; little hemorrhage or shock; three weeks later complained of pain and inability to draw a long breath.	July 29. Abdomen opened through incision in scar of injury, three plmts of thin dark-greenish fluid withdrawn; ball had penetrated the cavity and entered liver, but was not found; cavity washed out.	Sept. 7 had recd covered, but some tenderness remained	Boston Med. and Surg. Jour., 1892, CX XVI, p. 416.
31	Priddy, A. S.	July 11, 1891.	L. C., colored girl, aged 10, No. 6 shot entered between anus and tip of coccyx; and passed through rectum and vagina; morphine and wound washed with solution of bichloride of mercury.	July 13. Incision six inches long, in linea alba; found part of the charge and wadding lodged under peritoneum, just over bladder; no injury to small intestine; perforation in lower part of rectum; cavity contained stinking serum.	Died some hours after injury.	Virginia Med. Mon., Richmond, 1891, XVIII, p. 764.
32	Priddy, A. S.	Aug. 7, 1891.	H. L., colored, aged 30, ball entered two inches above and to left of umbilicus; very little pain; Aug. 9, peritonitis.	August 9. Incision in median line, from above umbilicus to pubis; six perforations in transverse colon, one so large as to require elliptical resection; the others closed with Lembert's sutures; fecal matter and serum flushed out.	Died the morning after operation.	Virginia Med. Mon., Richmond, 1891, XVIII, p. 764.
33	Robinson, E. M.	Aug. 25, 1891	F. H., ball entered one inch below and to left of umbilicus.	Cavity opened twenty hours after injury; incision from one inch above to two inches below umbilicus; intestines drawn out; blood clots removed; seven perforations closed by Lembert's sutures.	Died seven hours after operation.	New Orleans Med. and Surg. Jour., 1891-2, XIX, 896.
34	Robinson, E. M.	Nov. 12, 1891	C. T., ball entered just below and to right of umbilicus.	Incision opened, sixteen hours after injury, by incision from umbilicus downward. Four holes found in intestines, and closed by Lembert sutures; clots sponged out and cavity flushed. Doing well until sixth day, when he ate something. "we do not know what."	Died ten hours later.	New Orleans Med. and Surg. Jour., 1891-2, XIX, 896.
35	Robinson, E. M.	Jan. 9, 1892.	H. McN., ball entered two inches above Poupart's ligament on left side, and passed upwards and inwards.	Abdomen opened three hours after injury; incision from entrance wound upwards to median line; cavity full of blood; wounds in mesentery still bleeding; two holes in gut closed.	Died sixty hours after injury.	New Orleans Med. and Surg. Jour., 1891-2, XIX, 896.
36	Jelks, J. T.	April, 1892.	Male, aged 22, ball entered three inches to left of spinal column and on lower border of left rib; vomited blood.	On same day, incision from ensiform cartilage to umbilicus; small quantity of blood in cavity; posterior edge of liver injured; drainage tube, covered with iodiform gauze, passed into liver; no other viscus found injured.	Recovery.	Jour. Amer. Med. Assn., Chicago, 1892, XIX, 164.
37	Gage, H.	July 5, 1889.	F. M., aged 15, ball entered two inches from median line, one inch below margin of ribs; in three weeks wounds of entrance healed, but complained of severe pains.	July 29. Vertical incision, two inches long, enlarged during operation; track of wound stained black; peritoneum perforated; three plmts of thin dark-greenish fluid withdrawn, containing blood pigment and bile pigment; cavity washed out.	Recovery.	Boston Med. and Surg. Jour., 1892, CX XVI, p. 416.
38	Ahern, J.	May 25, 1891.	J. B. D., aged 23, ball entered abdomen on left side, midway between umbilicus and anterior superior spine of ilium.	Median incision from umbilicus to pubis, five hours after injury; copious blood in cavity; found seven perforations of intestines, which were closed with Lembert's suture; three perforations of transverse colon also sutured; cavity washed out. May 26 and 27, vomiting.	June 20 entirely recovered.	Union Med. du Canada, Montreal, 1892, VI, 281.

SHOT-WOUNDS OF ABDOMEN—LAPAROTOMY—Continued.

Case No.	Operator or Reporter.	Date of Injury.	Patient and Injury.	Treatment.	Result.	References.
39	Brenner, A.	June 6, 1891.	R. L., aged 16; fine bird shot from a distance of 30 cm., entered 2 cm. below ensiform cartilage; no heart or lung trouble; application of ice; June 8, chills.	June 8. Wound enlarged upwards and downwards; found effluent blood; penetration of left lobe of liver; shot channel in liver cleansed, pieces of clothing and shot removed, drain tube, wrapped in iodoform gauze, inserted.	Recovered.	Wiener Klin. Wochenschrift, 1892, V, 267.
40	Halsted, A. E.	July 14, 1891.	B. B., aged 19; ball entered over ninth intercostal space in right side, two inches from spinal column; another bullet wound about two inches below first.	Incision, one hour after injury, in median line, from above umbilicus to pubis. No perforation of intestine. Patient turned over and incision made over wound of entrance; convex surface of liver found injured; also perforation of diaphragm, which was sutured; intestines washed with sterilized water, and attempt made to replace them, which failed, owing to over-distension; enterotomy and opening in gut sutured, after escape of gas.	Recovered.	Chicago Med. Press, 1891, II, 331.
41	Halsted, A. E.	July 25, 1891.	G. O., aged 20, ball entered just below twelfth rib, two inches to right of spine.	Incision in linea alba, from umbilicus to near pubis; found intestines stained with blood; small wound on convex surface of liver; two perforations in stomach, just above pylorus, close together; made into one, and sutured; pelvis of kidney found perforated, but was not sutured. Abdominal cavity not washed out, and yet there was no peritonitis.	Recovered.	Chicago Med. Record, 1891, II, 331.
42	Senn, N.	Sept. 9, 1888.	J. J., aged 16; ball entered two inches to right of middle line, on a level with anterior superior spine of ilium; omentum protruded.	Median incision, eight inches long, three hours after injury; a pint of fluid blood in cavity; hemorrhage continued from mesenteric veins. Near middle of ileum were found ten perforations; another near ileocecal valve; all perforations closed.	Recovered.	N. Senn, Intestinal Surgery, Chicago, 1889, p. 255.
43	Senn, N.	Oct. 8 (?)	J. E., aged 18; ball entered at outer margin of left rectus, about an inch below level of umbilicus.	October 9. Cavity found filled with fluid blood; five perforations near junction of jejunum and ileum were closed with Czerny-Lembert sutures; two perforations of mesentery.	Died eight hours after operation.	N. Senn, Intestinal Surgery, Chicago, 1889, p. 255.
44	Senn, N.	July 9, 1888.	C. H., aged 72; ball entered sixth intercostal space.	Incision from ensiform cartilage to umbilicus, two hours after injury; found perforation in stomach, between pylorus and cardiac end of greater curvature; perforation sutured.	Collapsed during operation.	Medical News, 1888, LIII, p. 265.
45	Senn, N.	Sept. 23, 1889	Boy, aged 14; wound of entrance corresponded with umbilical depression; omentum in wound of entrance; no shock; morphia and atropia.	Abdomen opened seven hours after injury; small quantity of blood in cavity; no injury to viscera; bullet found in the space between eleventh and tenth rib, and extracted.	Recovered.	Verhandlungen des X. Internationalen Med. Congresses, Berlin, 1891, B III, p. 149.

46	Zimmer, E.	Feb. 6, 1890.	E. S., aged 23; entrance wound in left hypochondrium, one inch from costal cartilage; wound of exit in anterior axillary line in seventh intercostal space.	Incision parallel to border of rib, through entrance wound, seven hours after injury; perforation of stomach at anterior wall, two inches from greater curvature; exit wound at fundus; both closed with sutures. Died well until February 12, when he died suddenly during the night.	Died Feb'y 12, 1890. Autopsy: Wound of stomach well healed; death from hæmorrhage from wound of spleen. Recovered.	Bertrage zur Klin. Chir. Tabungen, 1891-2, VIII, 639.
47	Zimmer, E.	July 13, 1891.	F. S., aged 13; ball entered right side of abdomen on a level with anterior superior iliac spine; no shock; no pain.	Incision through wound, four hours after injury; very little blood in cavity; cæcum slightly perforated in two places; wounds sutured. Small intestine uninjured.	Recovered.	Bertrage zur Klin. Chir. Tabungen, 1891-2, VIII, 639.
48	Kerr, J.	Mch. 14, 1890	F. G., aged 38; ball entered two inches below and one and a half inches to right of umbilicus, tearing omentum, perforating transverse colon and stomach.	Laparotomy, two hours after accident; wounds of intestine and stomach closed; abdomen flushed and closed.	Recovered.	Virginia Medical Monthly, Feb. 1893.
49	Kerr, J.	Dec., 1892.	J. —, aged 28; ball entered below twelfth rib, wounding kidney; duodenum gall, bladder and liver.	Abdomen opened three hours after injury. Nephrectomy of injured kidney, suture of duodenum and gall-bladder. Additional wound behind gall-bladder discovered post mortem.	Died.	Virginia Medical Monthly, Feb. 1893.

At that time (1876), the available literature on the subject was scant; and although I could find nothing in the authorities to justify a different course than that pursued, I determined, should another case occur to me, to take the responsibility of opening the abdomen.

My second case occurred two years ago, the history of which I will now relate:

Theodore Grebe, aged 38; white; occupation, agent; residence, Washington, D. C.; admitted to hospital, March 1st, 1890.

About two o'clock in the afternoon, patient attempted to commit suicide by shooting himself in the abdomen—the ball entering about two inches below and one and a half inches to the right of the umbilicus. He was admitted about two hours after the injury in a condition of profound shock; pulse, 52; pupils contracted.

A laparotomy having been decided upon, it was commenced at 5:15 P. M. The abdomen was opened, the intestines all taken out, laid on hot aseptic towels, and examined for perforations, commencing at the cæcum and travelling upwards. There was found a large triangular tear of the omentum, measuring four or five inches in one direction and two or three in the other, which, after trimming the edges and arresting the hæmorrhage, was sutured. On further examination, there was found a perforation of the stomach, about one inch in diameter, which was also sutured. A double perforation and an additional contusion of the large intestines was also found and sutured. No other injuries having been discovered, the intestines were carefully returned to the abdomen; but considerable oozing being noticed during the closure of the abdomen, and the patient's condition being fair, he was eviscerated a second time and search for the bleeding points made. Some hæmorrhage seemed to proceed from the small omentum, but not enough to cause any anxiety regarding it. The abdominal cavity was now freely flushed out with hot water, and the wound closed and drained; the operation lasted from 5:15 to 7:50 P. M., and was conducted throughout with the utmost aseptic precautions. The intestines were covered with an abundance of sterilized towels, which were kept hot throughout the operation. The patient made a good recovery, and escaped from the hospital (he was under arrest) three weeks after.

Curiously enough, while preparing this paper, *my third experience* in gun-shot of the abdomen occurred, in the case of the negro Jackson, who was shot by a policeman, and whose case is being investigated at present.

The patient, a strong, well built negro, about 28 years of age, was brought to the Emergency Hospital at about seven o'clock on the morning of the 9th ultimo. I saw him about an hour afterwards; he was suffering from shock; surface cold; pulse small and rapid, and complaining of great pain referred to the abdomen, with constant desire to micturate—his urine becoming bloody before he was operated upon. On examination, an entrance bullet-wound was found immediately below the twelfth rib, one inch outside of the transverse process of the first lumbar vertebra on the right side. The bullet itself was detected underneath the skin on the edge of the ribs, a little to the left of the line of the nipple, and removed.

At 10:30 I opened the abdomen. Immediately on incising the peritoneum, fluid blood welled out of the abdominal wound, and the abdomen was found to be literally filled with blood. The same procedure was followed as in the last case; points of bleeding sought for rapidly and ligated; the intestines were then turned out of the abdomen, and beginning at the ileo-cæcal valve, I examined rapidly but carefully every inch of gut and mesentery up to the pylorus. The intestines were received on hot sterilized towels, spread over the abdomen up to the abdominal wound (which was made extensive enough to admit of the fullest inspection, extending from the ziphoid cartilage to two inches above the pubes) and folded over the viscera so as to completely surround them; other hot towels were laid over these, and from time to time during the operation, hot water was poured over the intestines to maintain their warmth. The intestines are thus, in my opinion, better protected from exposure to a lower temperature and unnecessary handling than if retained within the abdomen, where they are a source of serious embarrassment. This inspection demonstrated that the intestines themselves had escaped injury, with the exception of the duodenum and small omentum, a double perforation of which was found. The injured kidney was removed, the bullet in which was found to have traversed the hilum of the organ, only, however, doing slight injury to the cortex. The other injuries consisted of a wound of the gall bladder and one of the

liver, which I here show you. The wounds of the duodenum were first closed by a double row of Lembert sutures. As you see, the union is perfect twenty-four hours after suture, and holds water perfectly, with only a perceptible narrowing of the calibre of the intestines. The wound of the gall-bladder was sutured also in like manner.

The conclusion we came to at this time was that the ball had perforated the gall-bladder, passed through its posterior wall into the liver, and so on through its upper surface, producing an *extra-peritoneal* wound. In this we were mistaken, and it is possible if we had not come to that conclusion and searched more diligently for the wound of exit from the gall-bladder, we might have discovered, and in some measure closed it.

We did not, however, discover this wound until *post mortem*, and it would have been a particularly difficult matter to have dealt with it.

That it could have been completely occluded by suture, I doubt, owing to its almost inaccessible position. An effort might have been made to close in the injured part by suturing the side of the fundus to the liver, then draining the gall-bladder, and bringing it into the wound, as I did the other day in an intra-peritoneal rupture of the urinary bladder occurring so low down that I could not stitch it.

As it was, I carried the suture with which I had stitched the anterior or intra-peritoneal opening in the gall-bladder, up to the angle of the wound, and drew the bladder well up and packed it around with iodoform gauze.

The injury to the liver had not bled from the time it was exposed. There was considerable extravasation of bile and the contents of the duodenum before and during the operation. Hæmorrhage by the procedures detailed, had been almost entirely controlled, except at the site of the nephrectomy.

While the intestines were still outside of the abdomen, we flushed the right abdomen in a very thorough manner, holding the ribs and right half of the incision well over, and tilting the patient on his side, the right half of the abdomen was thoroughly cleansed with sterilized salt solution, which we used abundantly throughout, and at a temperature uncomfortably hot to the hand. The intestines were replaced, the abdomen again flushed, and the incision closed. No drainage, except for the gall-bladder was provided.

The patient reacted well after the operation, which necessarily was a tedious one, lasting about two hours. He complained of great pain, was restless and thirsty, but otherwise in fair condition up to 8 o'clock, when it became evident that he was failing, not responding to such cardiac stimulants as strychnine, atropine, and digitalis, with half-ounce doses of champagne.

I decided to transfuse, and at 10 o'clock slowly let into his circulation three pints of sterilized salt solution, at a temperature of 105°. This revived his pulse beautifully for the time, but he commenced to go down again in the morning, and in spite of a second transfusion by Dr. Woodward, at 8 o'clock in the morning he gradually sank, and died at 9:30, twenty-three hours from the time he was put on the table for operation.

At the *post-mortem*, conducted by Dr. Schaeffer, Deputy Coroner, held twenty-seven hours after death, the dressings outside were extensively stained with bile, and on opening the abdomen considerable yellowish serum was found, and a second opening in the gall-bladder, situated partly intra and partly extra-peritoneal, which allowed bile to escape, and which was doubtless the cause of death. No inflammatory adhesions or paretic distension was found.

The conclusion in my mind, from my own personal experience in these cases thus cited is, that I would under similar circumstances always operate. In the first case operated on, will any one venture to assert that that man could have recovered with a bleeding mesentery which already had well nigh filled the abdomen, a double perforation of his great intestine, and an opening of the diameter of an inch in his stomach?

In the second case, the operation probably prolonged the man's life—certainly did not hasten or add to his suffering, and gave him the only rational hope of saving his life. So in spite of such good authorities as those who oppose intervention, I would do the same again to-morrow.

The operation of laparotomy for gun-shot is mainly formidable because of intestinal suture, at present made doubly so by the various and complex mechanical arrangements devised for speedy anastomosis. In the vast majority of cases enterectomy is not required, and if hospitals

would keep on hand, as we have found it greatly to our comfort and convenience to do, a couple of dozen of Sharp's No. viij milliner's needles, threaded with ordinary fine black silk, which can be sterilized (dry) and kept, or sterilized (steam) at the time they are wanted, and if we did not bother with nonsensical intestinal clamps, but would trust to gauze ligatures and an intelligent assistant's fingers, the contemplated difficulties of this operation would be materially reduced.

The next point that strikes me as important is an abundant supply of hot towels or napkins maintained hot throughout; and keeping the intestines out of the abdomen swathed in these hot and aseptic napkins until ready to flush the abdomen and close it; the exposure in a good light of the abdomen through a very free incision, and a methodical way of dealing with the perforations from below up, so that none will be missed, and so as to avoid unnecessary handling, or having to go over the ground twice, are also important.

In conclusion, I desire to express my gratitude to my House Surgeons and their assistants, Dr. Hutton with Drs. Boss and Sillers, who assisted me at the first cases, and Dr. Woodward with Drs. Heinieke and Stewart in the last.

ART. V.—The Food of Cholera Germs.*

By F. PEARSON, M. D., of Howe, Texas.

In a populous district of India, and among a people who are religious by nature, abstainers on pious principle, and abstemious from necessity, Asiatic cholera most frequently begins and becomes epidemic. From there, it almost invariably travels westward on agencies unseen and unfelt, and by means of personal contact carrying with it terror, pain, death, and affliction. Its paths are marked by desolation, but in them are favored towns and cities—favored because

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unvisited, and not because their immunity depends on sanitary or on atmospheric conditions. The cause of their immunity is well worth seeking; for its discovery would bring to light the active principle of the septic element of cholera, furnish the key to treatment, and point out the means of its prevention.

Beyond all question, *filth* is the life and sustenance of cholera germs, but it is *filth* of a distinct kind. The law which governs the chemical combination of its ingredients is unchangeable. Its quality is so invariable that every species of cholera germ has a food peculiar to itself. The species dreaded by the human race will cross the ocean in search of food, but will not molest the domestic animal; while the cholera germ which attacks hogs is harmless to man.

Dr. Koch calls the cholera germ "the comma bacillus—or spirillum cholerae Asiaticæ," and affirms "that, though never absent in cholera, it could not be found in other forms of diarrhœa, dysentery, in the sewage of drains in Calcutta, or in the impure waters of the Hooghli." Indeed, he found "that it quickly succumbed to the influence of putrefactive bacteria."

Cholera rarely travels to the East of India. The filth which it seeks is not to be found in that direction. If the people in those countries owed their immunity to cleanliness alone, the Russians, who are just about as free from dirt, would likewise escape epidemics.

Facts in abundance prove that cholera does not select its victims from among the unwashed, the ungodly, or the intemperate. The resident physicians in Hamburg, and the heroes who went to assist in that afflicted city, were no doubt examples of the doctrine that cleanliness is next to godliness, and, with extraordinary precautions, they became "as whited sepulchres without;" but as their intestines were loaded with a species of filth, many of them were attacked with cholera and fell under the scourge. It is not the class to which a man belongs, nor his vocation, nor his temperament, that gives immunity against cholera. It is the state

of his alimentary canal. In that organ, cholera finds the vulnerable part of man, and there it begins and continues its attacks.

"In studying the Egyptian outbreak in 1883, Dr. Koch found nothing in the blood or other organs, outside of the intestines, that showed any virus in them." "The alkalinity of the contents of the stomach protects the comma bacillus from agents destructive to them outside of the body."

From its inception, until its destruction, "there is no *resting stage* for the comma bacillus." Impelled by the "first law," it moves continually seeking what it may devour, in order to procreate its species. While nourished, it multiplies itself millions of times every day; and when its food becomes exhausted, the germs disappear or die. But this does not give immunity against subsequent attacks, as the filth may re-accumulate. The attack depends upon but one condition—that this *filth, when touched by the germ*, shall become its *assimilable food*. That condition being fulfilled, not only man, but every mass of excrement, is liable to an attack by cholera. On the other hand, all persons, whether of filthy habits or not, if free from the particular dirt upon which the germs feed, can pass through a pestilence unscathed.*

Every town and city free from that species of filth is favored, since within their walls no germ will seek admittance. The absence, therefore, of this particular kind of filth gives the immunity, and this filth furnishes the cause we are seeking to discover. It is a cause plain and simple, adequate and rational. But to comprehend this cause, and to make the knowledge useful, it is necessary to understand whence comes this species of filth, and what are its elements.

Of the epidemics that have appeared in the United States

* Profs. Petenkofer and Emmerich, who have been experimenting with cholera bacilli, say that local, and not individual conditions, engender the epidemic. Both men swallowed large numbers of cholera bacilli, and yet, but for slight diarrhœa, neither suffered any inconvenience.—*Texas Health Journal*, Dec., 1892.

the most recent, and one of the most remarkable, passed over the Middle and Western States in 1872. It was remarkable from the extent of its ravages, and from its seeming partiality. Towns and villages in different sections were attacked with great virulence, but other towns were spared, although equally subjected to the contagious influences. It scourged the country people in many neighborhoods, and spared other neighborhoods over which it passed. And it appeared in several cities, but made no headway in them, and did not especially attack the dissolute or dirty and uncared for inhabitants. Why that epidemic discriminated so greatly in favor of certain localities has never been explained.

There is another peculiarity about cholera epidemics in the United States. They appear always in places where limestone water abounds. An epidemic of cholera was never known to exist in the Piedmont region, which extends from Virginia to Middle Alabama. Those people, drinking free-stone water, are beyond the reach of Asiatic cholera. Not a particle of germ food is to be found in their intestines—consequently, the germ has no use for them; the cholera, no terrors.

The course of the epidemic which appeared in New Orleans about the year 1867 goes to establish this same fact—that the imbibers of pure water are not subject to attacks of cholera. In that city, the epidemic was confined principally to the business part of town, where the streets were clean and well-paved, but were supplied with water from the Mississippi river. The water used in other portions of the city was drawn from cisterns, and those who drank rain water only escaped. We now can understand why formerly it was a perilous undertaking to cross the Atlantic during the prevalence of cholera in the East, and yet there has been no epidemic of cholera on board of an ocean steamer for the last twenty years. This happy result was brought about by a change in drinking water, and not, as is generally believed and reported, to greater cleanliness and isolation. Since 1870, but not before, distilled water has been used in

the boilers of ocean steamers; and since then, as distilled water is cheaper on board of steamers than fresh water taken on at a port, it is also drunk.

The conclusion is unavoidable. The *food* of the *cholera germ*, or at least its principal ingredient, is deposited along the intestinal canal, and it comes from limestone water. Not from all kinds of limestone water, but from that kind which comes from localities where cholera appears in its worst form. Probably it is from that quality which disintegrates on standing, and leaves a deposit of dirt whenever mixed with soap. It is that which, after being drunk for a time, will incrust the intestinal canal, and in some cases of chronic enteritis it becomes a remedial agent by covering and protecting the raw and inflamed mucous surfaces. It is well known, however, that lime alone is not a food for any living thing, animal or vegetable, vertebrate or invertebrate. Of the cholera germ food, it is the base or principal ingredient, and the intestinal juices furnish the remaining ingredients. But the presence of the germ is essential in effecting a combination between this base and the other ingredients of the germ-food. Therefore, until the germ comes along, this lime deposit lies innocuous within the intestines. But whenever the germ appears and touches all these ingredients, it at once makes their combination, acting upon them as a match to an explosive compound. Hence, as Dr. Koch says, "The germ stands to cholera in the relation of cause to effect." If the lime deposit be large, and the germs innumerable, as is the case in virulent epidemics, the demands upon the system for intestinal fluids are instantaneous, excessive, and exceedingly rapid. This fact, and this alone, will account for the repeated vomitings and watery purgings; the thirst, agony, and rapid exhaustion. Although the germ excites these violent chemical changes, it does not itself combine with the lime or with any of the intestinal fluids. "Simply by its presence," to use the language of Dalton, "it induces a chemical change between the ingredients. This change is termed *catalysis* or *catalytic*

transformation. It is an important property of albuminous matter."

Now, if the theory here advanced regarding the source of food for the germs be correct, the prophylactics against cholera ought to be direct and effective. For, in that case, whatever will break up and expel the lime deposits ought, by that means, to prevent the disease. We might reasonably expect such a result from the administration of a copper solution, or of dilute sulphuric acid, as either will precipitate particles of lime floating in water. As to these prophylactics, the following reports in this connection are important and reliable:

1st. In Wood's *Therapeutics*, p. 98, the distinguished author quotes from a report made by Dr. R. G. Curtin on the use of sulphuric acid lemonade in checking a severe epidemic of cholera in the Philadelphia Alms-house within twelve hours after commencing its use—"the only new case after this being a man who refused the use of the prophylactic. Two days after the use of the sulphuric acid was stopped two new cases occurred, and the epidemic was again arrested by the use of the acid. In the surgical wards of the hospital the acid was used from the beginning, and although in no way isolated, were the only parts of the institution unvisited by the disease."

2nd. According to the *Medical and Surgical Reporter*, Oct., 1883, "M. V. Burg confirmed the reported immunity of workers in copper from cholera and typhoid fever. A trade society of three hundred members has not, since its foundation in 1819, lost a single member by either of these diseases."

It is said by bacteriologists "that cholera germs can reproduce themselves outside the body so long as there is moisture—for instance, in certain articles of food, or in fruits, in linen, or in drinking water;" but as to the nature of their food under these conditions, I have no knowledge, and can form no opinion. In due season, all this will be discovered by the learned and enthusiastic professors who have succeeded in cultivating the germs.

After the reading of Dr. Pearson's "paper," the following remarks were made by Dr. J. M. Fort, an oriental traveller and author of a book entitled, "The Texas Doctor, and the Arab Donkey, or, Egypt and Palestine as Viewed by Modern Eyes."

"The objection may be raised to the paper just read that it is purely theoretical and conjectural. That is true, but we should remember that theories are the offspring of thinking minds. They are the forerunners of science, the pioneers that wander over the unbounded and unexplored fields of Nature, wandering through its intricate and mysterious labyrinths in search of the unknown. Theories verified in the scale of demonstration and experimentation bring forth great truths which we find standing as beacon lights all along the pathway of modern science, especially the art and science of medicine. I propose to place a few well established facts side by side with the theory just read.

"Asiatic cholera is perhaps the most severe and fatal of all diseases, and belongs originally to Asia, more particularly to India, where epidemics are known to have occurred at various times for centuries. It is truly an oriental disease; its habitat is in those remote regions. In 1817, there was a severe outbreak in Bengal; this was followed by its rapid spread over a large portion of British India. During the next three years cholera continued to rage all over India as well as Ceylon and other Indian islands. It there took a wider range and invaded China on the East and Persia on the West. In 1823, it had extended into Asia Minor and Russia in Asia. It continued to advance slowly westward, while at the same time fresh epidemics were appearing at intervals in India. In 1830, in spite of the strictest sanitary precautions, it ravaged the northern and central parts of Europe, and spread on to England, reaching London in January, 1832, during which year it continued to prevail in most of the cities and large towns of Great Britain and Ireland. It subsequently extended into France, Spain, and Italy, and crossing the Atlantic spread through North and Central America. It had previously prevailed in Arabia, Turkey, Egypt, and the Nile district.

"By looking at the map of these countries it will be seen that Arabia, Persia, Beloochistan, and India, all border on the Arabian sea, and possess a great similarity of climate, topography, character of soil, and it may reasonably be supposed that the water of all this section is strongly impregnated with lime, since the soil of even very many of

its valleys is intermixed to a large degree with lime, and many of its mountains and hills are composed of soft limestone. The wilderness of Judea, in Palestine, consists of limehills—so thoroughly destitute of verdure that in the distance they glisten in the sun as though they were covered with snow.

“It has long been observed that the Mahomedan pilgrims on their return from the great national shrine at Mecca would die by the hundreds—many of them by the wayside and scatter the germs of this disease far and wide over those oriental countries. It is a religious duty enjoined by the Prophet and incorporated in the Koran, that every Mahomedan visit this celebrated temple once in a lifetime. Until the building of the Suez canal, these pilgrimages were made overland by means of caravans; but now many of them, especially from the Black sea country and Equatorial Africa, go by the water route to Jeddo, and thence out to Mecca fifteen miles distant. The ritual of service enjoined upon them upon entering the sacred precincts of the temple, embraces among other things drinking water from the Zem Zem, or Hagar’s well.

“The English Consul station at one time at Jeddo, procured several bottles of this water by bribing one of the pilgrims—it being death to any other man than a follower of the Prophet to enter its sacred precincts. This water was forwarded to Prof. Simon, the great London sanitarian, who administered it to various animals, such as rabbits, rats, cats, etc., all of which died, evincing the pathognomonic symptoms of cholera. It is now a settled question that there is no such thing as spontaneous generation; hence it follows, that these disease-producing germs are created entities, and that they have been furnished media and environments, suitable not only for the maintenance of life, but also for their reproduction and propagation. Lime may be one of the essential ingredients of this media. Who can say?”

Having used *McArthur’s chemically pure* Syrup of the Hypophosphites of Lime and Soda for some time in my practice, it affords me pleasure to recommend it to my patients who are suffering from incipient phthisis, chronic bronchitis, and other pulmonary affections. In all wasting diseases I think it a most reliable remedy. It increases appetite and promotes digestion.—DAVID F. DREW, M. D., Councillor Massachusetts Medical Society.

ART. VI.—Some Points in the Diagnosis of Cutaneous Diseases.*

By JAS. C. McGUIRE, A. M., M. D., of Washington, D. C.

To assign merely a name to a disease is not sufficient in making a diagnosis. We must also recognize its nature to distinguish it from all other diseases.

The power to master this art thoroughly, is given only to the clinical student; this is particularly applicable to the study of cutaneous maladies, for it is utterly impossible to obtain a correct idea of these diseases from text-books and atlases alone. As has been well said, "Atlases are but representations of one phase of complaints which are almost kaleidoscopic in their variations.

There have been many popular errors in regard to cutaneous diseases that were not confined to the laity; the difficulties of correct diagnosis were regarded by many as almost insurmountable; but the increased attention paid to the study of dermatology in recent years, has done away with many of these errors, and has rendered the study interesting not only to the specialist, but to the general practitioner as well.

Prof. Hebra has said, "For the recognition of a disease of the skin, no other assistance is required than a knowledge of the objective symptoms which are visible on the surface of the body in each particular case. We do not attach any value whatever, either to the history or to the subjective phenomena in investigating a cutaneous affection."

This statement, though made by the father of dermatology, may possibly have been true in regard to himself, but is not one that can now be accepted without reservation. Granting that the objective symptoms are of the most importance, our opinion, formed from the inspection of the patient, must yet be modified by the history of the case and the subjective symptoms. It is at times impossi-

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, November 14th, 1892.

ble to distinguish a squamous eczema from a syphiloderma squamosum of the palms unless we know something of the previous history.

What constitutes a correct diagnosis in dermatology, and what are its difficulties? It is of the first importance to have some systematic method of procedure:

1st. Make a thorough examination of the whole skin. Even in the case of females, do not let the natural modesty felt by the patient overcome your duty of seeing all of the eruption wherever it may be situated. We may have a rash upon the scalp that is almost impossible to recognize; when an examination of the knees and elbows may show typical plaques of psoriasis.

2nd. Observe the color and form of the eruption, though you may not find, in syphilitic cases, the so-called "copper color," or the color "like the flesh of raw ham," and yet the tint may often help us, as the yellow color in xanthoma, the pink of keloid, and the yellow cup-like crusts peculiar to favus. The form of the eruption in ring-worm and herpes iris, and some of the syphilodermæ are characteristic. Notice the situation, for some rashes occur only on particular localities; others prefer certain other situations. Acne, for example, can never occur on the palms and soles; it is more likely to be found upon the face than elsewhere. Psoriasis is usually found on the elbows and knees—never in the palms. According to Hebra, tinea versicolor never appears in the face; scabies does not appear on the face of adults.

Freckles may exist where the direct rays of the sun have never touched. A young lady under my care had a patch of freckles about one inch broad, and three or four long upon the abdomen, but none upon the face.

Age and sex often play an important part in the etiology of skin diseases. Tinea tonsurans does not appear in adults. Neither Duhring nor Piffard ever met with a case. Tinea versicolor does not occur in childhood—children are exempt.—(Wyle and Geber). Acne does not occur in children. Chloasma never occurs before puberty. Sycosis cannot, of

course, occur except as an oddity in females, though I have had one such case referred to me recently.

Recognize the individual lesion, for this will often guide us to a correct diagnosis. It is not alone necessary to decide that a given lesion is a papule or vesicle, but we must decide upon the variety. Are the papules angular in shape, smooth and shining, depressed in the centre, like those peculiar to lichen planus, or are they rounded and acuminate as seen in eczema? Are the vesicles minute and clustered together over an erythematous surface as in eczema, or do they follow the course of a nerve as in herpes zoster? Are they accompanied by papules, pustules, excoriations, and crusts as in scabies?

As to the secondary lesions, recognize the difference between a crust and a scale. They are too often used as synonymous terms.

Are the cast off scales imbricated, white, mother-of-pearl color? Are they easily detached, leaving a red punctate bleeding surface as in psoriasis, or are the scales large, thin, papery, shed in great numbers as in pityriasis rubra?

What are the character of the crusts? Are they dark in color, piled up on each other in the shape of an oyster shell, like the rupial crusts peculiar to syphilis, or are they thin and red as seen in lupus?

In this way we may gain a clear insight in regard to the disease by not only noticing the lesions, but by observing the peculiarities.

Is the disease acute or chronic, for on this often depends the proper treatment of the case as well as the diagnosis. Is the lesion upon the face in the form of reddish brown tubercles, that easily break down, leaving an ulcerated surface, chronic in its course; or, like syphilis, acute, doing more harm in a few months than lupus would in as many years.

Though the objective sensations are the most important, we must not entirely neglect the subjective symptoms and the history of the case. The most constant sensation is that of pruritus. It is not always necessary to ask if the

eruption itches, for the marks due to scratching may be plainly discernible. The peculiar streaks produced by the finger-nails upon various regions of the body are often characteristic of pediculosis corporis. Idiopathic pruritis has no other symptom than that of itching and the resulting scratch-marks.

Burning, tingling sensations, are characteristic of urticaria, as is the pain accompanying herpes zoster.

The influence of drugs upon the skin, is well marked in many cases due to idiosyncrasy. There is hardly a drug known that is not capable of producing an eruption. The eruption is, of course, not dependent upon the amount taken; five grains of iodide potash may produce an eruption as well as five hundred; nor is it "caused by the elective affinity of the drug, for the constituent elements of the glands"; but the rashes are supposed to be due to specific action of the drug upon the nerves and nerve centres.

Though the history of the case is important, that we must not depend on it too exclusively is exemplified in the following case.

The patient had a copious papular eruption over the thighs, legs, and arms. The papules were large, flat, circular, and brownish in color, with a tendency to form patches. A mucous patch existed on the lip. Diagnosis, papular syphiloderm. On questioning the patient, she said the skin itched very much; that she suffered from rheumatic pains, but only during the day—never at night; she did not remember having had sore throat; had been a widow for six years. It was subsequently ascertained that she had been treated for syphilitic retinitis, and the eruption is now disappearing under mercurial treatment.

If the subjective symptoms had been first considered in this case, they would have tended to exclude syphilis in the mind of the examiner.

It is well to remember that some skin diseases have marked preferences for certain regions. Erythema nodosum usually occurs upon the legs; lupus and acne upon the face; psoriasis upon the elbows and knees.

Is the patient suffering with any constitutional distur-

bance that may modify or change the appearance of the eruption? Gout and rheumatism may not only dispose to attacks of eczema, but may render these diseases more pronounced and more difficult to cure; though Bronson and others believe pre-existing lesions are rarely, if ever, affected by syphilis, such an excellent authority as Tilbury Fox has declared that the modifications of skin diseases by the syphilitic poison, is a most important fact.

In what way are skin diseases modified? The disease causes an alteration in the nutrition of the tissues, so that the changes in the tissues usually produced by syphilis are impressed upon it. It is altered by being made more chronic; there is greater pigmentary deposit; less scaling; more crusting, and more infiltration. I have elsewhere reported a case where a woman presented herself with an eruption on the palms of hands and fingers. It made its appearance eight years previously—being better and worse at times, but never entirely disappearing. Several competent observers pronounced the disease eczema; but the skin was observed to be darkly pigmented in places, the lesion marginate in outline—not fading into the surrounding skin as is usual with eczema. This, together with the fact that appropriate treatment failed to give relief, induced the observer to institute a thorough anti-syphilitic treatment, with the result of the complete disappearance of the eruption within three weeks.

It is not to be presumed that the general practitioner could either devote the time, or feel the inclination to keep in mind such rules as I have attempted to formulate; it has simply been my desire to call attention to the most important features in diseases of the skin, and to systematize a few rules to guide us to a successful examination.

Uterine Colic and Ovarian Neuralgia.—Two teaspoonfuls of Dioiburnia given in a teacup of hot water will give almost as prompt relief as a hypodermic of morphine, and will produce no unpleasant after-effects.

ART. VII.—The Etiology of Decay in Teeth.

By J. C. HURST, M. D., of Allisonia, Va.

The etiology of decay in teeth is a subject which has been too much ignored by medical writers. There is hardly an individual who is not a victim to its ravages prior to the age of thirty years, and all suffer in the evening of life. Such a state of affairs ought not to be. From the mere fact of its universal prevalence, the hypothetical deduction is drawn that there is a common cause. The elucidation of this, I hope, will be the reward of my efforts.

Man was created a complex machine, into which was breathed the breath of life. As he lives he consumes himself or dies daily. This consumption is replaced or reconstructed by the nutrition of food.

The chemical substances entering into his composition are divided into organic and inorganic, the different combinations of which make up the different tissues of the body. If the organic preponderate, the tissues are rendered soft and pliable, as seen in muscles, blood-vessels, nervous matter, fasciæ, etc. If the inorganic elements preponderate, the tissues are hard and brittle, as found in bone, nails, hair, epidermis *and teeth*.

Nearly all organic tissue contains a small amount of inorganic matter, while all inorganic tissues are composed of some organic elements. As the teeth are composed mainly of inorganic matter, we will consider the chemical analysis of the group of tissues with which it is classed.

Bone is composed of 66.7 per cent. of inorganic substances and 33.3 per cent. of organic matter. It constitutes 6.4 per cent. of the entire body by weight. The composition of nails, hair, and epidermis is about the same as that of bone.

The teeth are divided into three tissues—viz., cement, dentine, and enamel. *Cement* has nearly the same proportion of organic and inorganic matters as bone, while *dentine* has less water and organic matter. The enamel, covering the crown and neck of the tooth, is the hardest substance of the body. It contains 96.4 per cent. of inorganic salts,

and 3.6 per cent. of organic matter. It is for the protection of the inner or softer parts of the teeth; hence its very hard consistency.

Calcium phosphate enters more largely into the structure of enamel than any other salt. This salt is found in small quantities in the soil, and serves as plant food. It forms 84.9 per cent. of enamel and about 51 per cent. of the remaining hard inorganic tissues. Remember, it is found in nature in small quantities, and enters largely into the structure of the human body. The other constituents of enamel are calcium fluoride 2 per cent., magnesium phosphate 1.5 per cent., and calcium carbonate 8 per cent.—all of which are found in nature in water or rocks and vegetation.

The foregoing considerations are only applicable to the adult human subject. In the newly-born babe inorganic matter enters into its structure in very small proportions.

A word as to the chemical constituents of the food which nourish the tissues: Food is divided chemically into organic and inorganic matters. But I shall consider only the mineral salts of food, as they mostly concern the teeth.

In meats, eggs, milk, vegetables, and the cereals especially, nature has compounded these chemical ingredients for man's sustenance. Of the meats which are of daily consumption, mineral salts claim only 1.5 per cent of their structure; eggs, 1.5 per cent.; milk, 4 per cent.; white beans, 3.2 per cent.; potatoes, 1.3 per cent. But as it is necessary that all tissues be supplied with their required nutrition three times a day, the proportion of inorganic salts to the organic matters in cereals is of especial importance, since it is the only article of food eaten tri-daily.

The cereals of which bread is made are wheat, Indian corn, and rye. Wheat contains 2.5 per cent. of mineral salts; corn 1.25 per cent., and rye 2.6 per cent. These are amply sufficient to nourish the bones, nails, hairs, epidermis, and teeth with inorganic tissues if taken as food. These cereals contain the same chemical salts as the teeth, principally phosphate of lime; and these salts are arranged on the exterior of the grain, in the bran, as on the exterior of

the teeth, in the enamel. It is evident that the teeth are chiefly supplied with nutrition from the cereals, and that the enamel is especially nourished from the bran.

Here is a solution of the problem. But man demands that the bran of wheat, corn, etc., be separated from the interior part of the grain and rejected from his table flour. The consequence is that the organic tissues are nourished, while the inorganic suffer from inanition. The enamel is the first to show evidence of starvation. Instead of retaining its normal hard luster, it grows dull and soft for want of mineral salts, and finally gives way in the act of mastication, and the inner structures of the teeth are soon lost from a want of its protection. The pain which ensues is its cry for phosphate of lime. Physicians, when prescribing for the emaciated, prescribe fats and oils; for the anæmic, iron; and for nervous exhaustion, phosphorus; then why not phosphate of lime and other mineral salts abundantly to prevent decay of teeth? Not only are the mineral salts found in the tissues of adults to be retained in proportion to animal matter by the supply from without, but it must be increased in quantity from infancy to old age, as the amount normally increases as age advances.

Let us next compare the dental conditions of different individuals who are accustomed to different habits of life.

The primitive settlers of this country were not accustomed to our modern inventions by which food is so nicely yet improperly prepared. Instead of mills which grind the grain into impalpable powder, so to speak, making the different grades of flour, they carried their grists to the log mill on the branch, where the cereals were merely crushed in there entirety, and so made into bread and eaten. They ate food as found in nature before they had been improved upon by modern ingenuity. Our present process of grinding wheat or rye, etc., by which the bran is first separated, then the exterior of the remaining grain, and still again the exterior of what remains, until the heart is reached, and each sold as distinct and refined grades of flour, is almost equal to separating the grain into its chemical constituents,

and selling each ingredient separately. The result is, that instead of the primitive man of sixty years cracking walnuts, hickory-nuts, etc., with his teeth, we have the modern man of thirty gumming his bread, cushow, and pumpkins. The same comparison holds good to-day, though in a much less degree, between the man of the city and the country man, notwithstanding the fact that the teeth of the city individual can claim the attention and care of the dentist.

Nearly all cooked and palatable food is solid and must be reduced to a soluble condition before it can be taken up by the blood-vessels and made assimilable for the nourishment of the tissues. The preliminary act by which this is accomplished, is the process of digestion. So food is not changed, but the transformation of albuminoids into peptones, and starch into glucose, is only an act of hydration, or the addition of water, and the fats are merely emulsified or dissolved, while the mineral salts retain their identity. Digestion is the gateway through which food must pass on its way to the tissues. Mastication is the first act of digestion, and this is performed mainly by the teeth. They must necessarily triturate the food before it can be digested. The Creator provided children with a temporary set of twenty to be used and misused, but replaced them by a permanent set of thirty-two to be used with much discretion by adults. This permanent set was intended to last the remainder of our natural lives, but they do not do it in this generation. To secure this result we should more closely adhere to Nature's laws. Take the food as prescribed and compounded by our Great Physician, *quantum sufficit ter in die*.

In our bread, let the entire grain enter—bran and all—at each meal. To be sure it will appear dark and coarse, but when once we become accustomed to its use, it is palatable and easy of digestion. While such a correction in our living will not repair the evil already done, it will prevent future destruction and be a blessing to the coming generation. This is a duty we owe not only to ourselves but to our children. Then, not until then, will we die that death which is a physiological process with a mouth full of healthy teeth.

ART. VIII.—Concerning the Use of Cocaine in Enucleation.

By **JOHN DUNN, M. D.**, of Richmond, Va.

CHIEF OF CLINIC OF RICHMOND EYE, EAR, AND THROAT INFIRMARY.

At the Richmond Eye Infirmary, for the past three years, save in exceptional cases, such as very young children, cases of panophthalmitis, etc., almost all of the enucleations have been done under cocaine anæsthesia. The strength of the solutions used has varied from 4 per cent. to 25 per cent.

Its mode of application has been as follows: A few drops are instilled into the eye, so as to render anæsthetic the conjunctiva in order that the speculum may be placed in position. The usual circum-corneal section of the conjunctiva is then made, and the conjunctiva is then separated from its loose attachments immediately adjacent to the line of section. The loosened conjunctiva is then lifted with a pair of Steven's forceps, and two or three drops of the solution are injected beneath it over the insertion of each of the recti muscles. After waiting a couple of minutes, the section of the tendons can be made without pain.

The ordinary straight glass eye-dropper is used for the purpose of applying the cocaine, and answers admirably well. It is preferable to the long silver canula used for this purpose.

After the section of the muscles, the eye-dropper is forced close to the ball back to the region of entrance of the ciliary and optic nerves, when, by pressing on the rubber, the solution can be put in this region. Generally speaking, it is best to make one application of cocaine to the nasal side of the optic nerve region and one to the temporal. After a minute or two the optic nerve can be cut with little pain to the patient. A 20 per cent. solution should be applied in the region of the optic nerve entrance. A 4 per cent. solution will answer for the other regions. In general no further directions are necessary.

When the conjunctiva is much inflamed a 20 per cent. solution will have to be used, as will also be the case where there is disease of the ciliary region. In cases of absolute glaucoma, at times, a 20 per cent. solution of cocaine not

only will not induce anæsthesia of the conjunctiva, but will raise the tension of the ball, increase the congestion of the conjunctiva and at the same time increase its sensibility. In these cases, it will be necessary to do a paracentesis of the cornea, or even partial section of it, and thus lower the tension of the ball, when the above procedure for enucleation can be carried out. At other times, owing to the extreme congestion of the parts immediately adjacent to the cornea, under cocaine the usual conjunctival section cannot be made in this region. In these cases it will often be found that it is possible to make a slight incision into the conjunctiva, over the external or internal rectus tendon. The conjunctiva should here be lifted and a few drops of a 20 per cent. solution of cocaine injected from the eye-dropper under it, when, after a few minutes, the operation can proceed.

In old people apparently a weaker solution of cocaine is required than in young persons.

ART. IX.—A Simple Tourniquet Clasp.*

By H. AUGUSTUS WILSON, M. D., of Philadelphia, Pa.

CLINICAL PROFESSOR OF ORTHOPÆDIC SURGERY AT THE JEFFERSON MEDICAL COLLEGE.

It must be evident to every one who has occasion to use the elastic tourniquet and Esmarch's bandage that the simplest forms of all methods of fastening it, when applied, is either not known, not efficacious, or possesses other disadvantages. The method referred to is to pass the loop of rubber-bandage underneath one of the last turns as it is applied, which, by contraction, holds the end in place.

The rubber tourniquet, as sold by the shops in this country, is always provided with a chain of about six or eight inches in length, for the purpose of holding the end of the bandage and keeping it from slipping. The use of this chain necessitates the application of the entire length of the bandage, whether it is required or not.

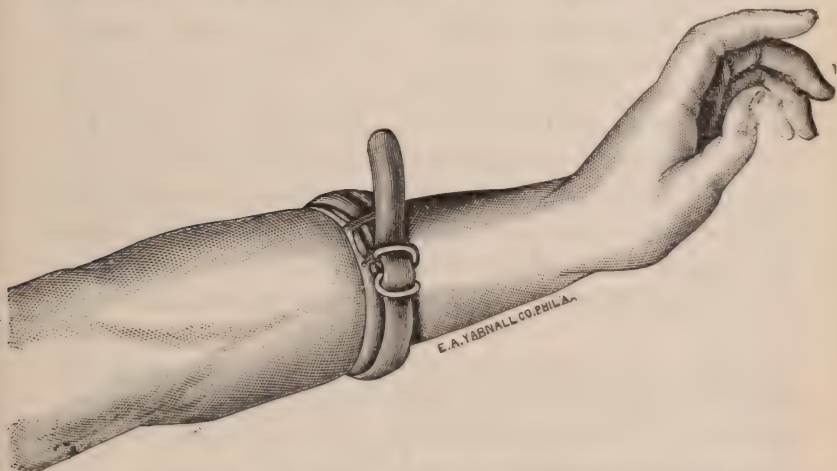
It was in order to dispense with this chain that I devised

* Read before the Philadelphia Academy of Surgery, January 9th, 1893.

the simple form of clasp that is shown in the accompanying illustration.

S Messrs. E. A. Yarnall & Co., surgical instrument makers, in this city, have made the clasp, following my directions. It consists of a simple letter S, made out of one-eighth inch German silver wire, and is so simple in its construction that any one can twist a piece of wire into the necessary shape, as I did with the original design.

The manner of using the clasp is so clearly shown in the cut that a description is not at all necessary.



Its advantages are simplicity of construction and use; the tourniquet may be clasped at any point; while in use it cannot slip; and the tourniquet may be unclasped with the greatest ease. It would appear that there was some necessity for a form of clasp of this nature, in view of the extensive advertisements in English medical journals of a *patented* appliance of very much more elaborate construction, and therefore quite expensive. Continued trials of this simple clasp when used with ordinary elastic rubber tubing, have shown that it was all that was required for the purpose, and it is hereby given to the profession with the hope that it may tend to displace more cumbersome and unsatisfactory methods of accomplishing the same end.

ART. X.—The Albumen Reaction—Resemblance of Piperazine in Urine.

By **H. BERLIN, M. D.**, of Chattanooga, Tenn.

PROFESSOR OF PATHOLOGY AND CLINICAL GYNÆCOLOGY, CHATTANOOGA MEDICAL COLLEGE, ETC.

During the winter of 1892, at a time when piperazine was a fashionable uric acid solvent, in a large number of specimens which were sent to the Pathological Laboratory of the Chattanooga Medical College for examination, the most of them showed, with the picric acid test, the reaction of what appeared to be albumen. The same specimens tested for albumen with nitric acid, or any other albumen test, did not show its presence.

Concluding from this that there was some chemical body in these specimens that gave the cloudy zone, and to prove that it came from the remedy piperazine (for upon inquiring into the history of those specimens I found that piperazine had been the remedy prescribed), I administered to myself four grains of piperazine three times a day, and in twenty-four hours the urine showed the reaction, as before mentioned.

A mixture of urine and piperazine tested the same way will show a like reaction, with the exception that the precipitate formed is not so finely dispensed, and resembles more the albumen when coagulated by boiling.

I only wish to state these facts for the reason that I have never noticed any previous observations on the subject; and as serious consequences can follow from mistaking this resemblance in the urine for albumen by this test, and under the circumstances named, when it is really not present, this note may benefit both the physician and patient.

Ponca Compound (Mellier) is an excellent uterine alterative, acting specifically as a tonic to the nerve forces of the pelvic organs, thus stimulating the absorbents to remove engorgements and plastic exudations. It is particularly valuable where manipulative or mechanical interference is undesirable or impossible.

Clinical Reports.

Case of Aneurism of the Aortic Arch and Rupture into the Oesophagus—Death—Autopsy.*

By H. P. WENZEL, M. D., of Milwaukee, Wis.

Frank L. was born in German-Poland December 16, 1830, of healthy, long-lived parents—some of his ancestors having passed their century milestone. His brothers and sisters are in good health, and hereditary disease or predisposition is an unknown factor in the family history. He affirms that he was never sick enough to be in bed prior to the present trouble, and denies venereal infection. He served seven years in the Russo-Siberian Rebellion, and endured all the hardships incident to war and a rigorous climate. After leaving the army, he emigrated to America and became a car-repairer, at which vocation he was continuously employed for nearly twenty-nine years. He is the father of three healthy, vigorous children; his wife died ten years ago of some trouble incident to pregnancy. He is an inveterate smoker, but uses stimulants rarely, his favorite beverage being a glass of Bordeaux. Appetite always good; sleep dreamless and refreshing; bowels regular; senses normal, excepting hearing, which is much impaired.

About ten years ago, he began with "spells of shortness of breath and palpitation of the heart," at long intervals, lasting only a short time. When the "spell" was over, he felt as well as before; in fact, he attributed them to his long-continued hard work in a constantly stooping position.

Several years ago, he noticed that micturition was not so free as before, but suppression was neither relative nor absolute; pain was never present, and the urine was always clear and the quantity ample.

About a year ago, he observed that the attacks of dyspnoea increased in frequency, severity, and duration. He had to rest frequently while at work. His appetite kept good, and his "heart-beat all right," and he slept as usual. Sometimes he would have a "dull, heavy feeling behind the breast bone," which lasted for hours at a time.

Six months ago, he began to suffer from "heaviness and

* Specimen presented and report read January 6th, 1893, before the Brainard Medical Society, in the Milwaukee Hospital meeting.

dull," undefined pain in the chest between the sternum and spine. Lately there came on a dry, tickling cough, but he expectorated only a little mucus. Still more recently he also noticed a little difficulty in the efforts at swallowing large morsels of food, causing a dull, momentary pain, and a feeling as if it passed by or over an obstruction.

Three months ago, he commenced losing flesh and strength, taxing him to the utmost in performing his usual work. The dyspnœa increased in severity and continued unabated for hours at a time; his heart beat faster and less strong than before. His extremities easily became cold—the fingers "numbed" sometimes. No swelling of either upper or lower extremities. Dizziness occurred often, and he was frequently troubled by great thirst.

October 26th, 1892, he concluded to see a doctor to get advice and help. His appearance was feeble, his gait slow and shuffling. He is quite deaf. Appetite good; great thirst; bowels regular; urination retarded; temperature normal; pulse 84, and rather small; considerable dyspnœa; respiration, 30. There is also a dry, irritable cough. There is no sign externally of injury, bulging or unnatural projection; but there is an obstruction to respiration which cannot be located. The heart-sounds are regular, but lack volume and clearness. The cardiac area appears to be lengthened upward under the right sternal border; the liver reaches below the costal border; the gall-bladder cannot be outlined; the spleen is enlarged; so is also the prostate gland. There is no abnormal sound distinctly discoverable in the thorax. His skin is citron-colored, and the sclerotics are moderately jaundiced. No headache, but complains of "losing memory." Eyes normal.

Diagnosis in doubt. There is evidently pericardial effusion, and probably aortic endarteritis, or even aneurism of the aortic arch.

He was advised complete rest, easily digested and nutritious food, milk plentifully, good light wine. Hot baths every few days. Heart tonics and iodide of potassium.

Medication seemed to have little effect. The best results were obtained from camphor in two grain doses frequently repeated, and

R.—Tr. nucis vomic..... $\overline{5}$ iiss.
 Fl. ext. grindelia rob..... $\overline{5}$ vj.
 Tr. belladonnæ..... $\overline{5}$ ij.
 Elix calisayæ, q. s. ad ft. $\overline{15}$ iv.

M. S.—Teaspoonful every two to five hours as may be required. Opiates interdicted.

The pains in the chest gradually yielded, and finally ceased altogether; appetite improved; he slept better, and appeared to gain in every particular. The pulse increased in strength, and the heart-sounds became more audible and distinct. The cough did not yield, but, on the contrary, became more annoying paroxysmally; dyspnœa remained the same, but was always worse on exertion. Phosphate of soda was ordered in fifteen-grain doses every three hours, and, according to his own words, "the white medicine made me feel better and breathe easier."

Until Saturday, December 3rd, 1892, he progressed very nicely. At 1 P. M., when I visited him, he had eaten a hearty dinner, and requested permission to "go to work next Monday." He was directed to keep quiet, not to work, to continue his medicine, and to let the cook serve him with food and drink. Besides a peculiar halting in the respiration, which was not constant, the thorax appeared normal. The slight impediment to deglutition still existed, the cough came at much longer intervals, but was, if anything, more harassing.

Next morning, at 4 o'clock, he had an unusually severe attack of coughing and dyspnœa, which soon subsided, and he lay down again in bed. An hour later, another paroxysm set in, but the family, although hearing it, paid no attention to it. At half-past 6 they waked up, went to his bed, and found the patient lying on his back across the bed dead, his body, bed and floor covered with clotted blood; a pail beside the bed also contained a quart of blood-clot. From his position, it was evident the patient made a supreme effort to get out of bed when the immediately fatal hæmorrhage occurred.

Post-mortem of thorax and abdomen was granted by the relatives to verify the cause of hæmorrhage and its source, and was made at 10 A. M. Dec. 5.

Body laid out by undertaker. Face blanched, skin lemon-colored, rigor mortis marked, tegument leathery; no scratches, bruises, contusions, or marks of violence. Subcutaneous adipose tissue scant.

Thorax.—Pleural cavity filled with reddish serum; no blood in clot. Right lung firmly adherent to chest-wall just outside of mammary line, beginning at second rib and extending downward nine inches, two inches nearly in width; tissues pulpy, many infarcts, fatty; left lung free from adhesions, but dotted with many fatty spots, yellowish white in color, varying in size from a split pea to a silver

quarter-dollar, extending into the parenchyma some five-eighths inch; they are soft, friable, apoplectic. Bronchi, nothing worthy of note excepting at bifurcation where compression is exerted by a sacculated aneurism projecting from the postero-superior surface of the transverse and descending part of the arch of the aorta and firmly adherent to both primary bronchi.

The pericardium is distended with a half pint of serous fluid.

The heart is remarkably small, fatty; the valves normal, but dotted with an abundance of small, gritty, atheromatous deposit. Myocardium: fatty degeneration. Right auricle largely dilated, the walls very thin—in the appendix, at one spot, about the size of a dime, the wall is no thicker than tissue paper, and translucent. The aortic valves are normal in size, but thickly covered with atheromatous plates. The coronary arteries are extraordinarily small in calibre, their lumen admitting a fine hair.

The aorta, from its origin to the arch, gives a sensation to the fingers as if lined internally by glass plates. Anteriorly, one inch above its root, is a fusiform dilatation involving the anterior two-fifths of the aortic wall, and extending upward two and three-eighth inches. This fusiform enlargement increases the lumen of the vessel in size; at the apex of this dilated portion is a spot as large as a dime, where the wall is very thin. The external appearance of the vessel is atheromatous.

At the upper and posterior walls of the transverse and descending portions of the arch is a sacciform aneurism, intimately adherent to the contiguous structures, and fused firmly with the œsophageal wall. The aneurism is of walnut size. Laying open the aorta, from its origin to the thoracic portion, shows great pathological changes in the vessel-wall; the intima has wholly disappeared, and instead is covered by calcific plates of various sizes and forms, with extremely sharp borders, edges, and angles. These plates glitter under a bright light, and feel like thin, gritty glass. The thin part, mentioned above as at the apex of the fusiform dilatation, was translucent, and the inner and middle coats were destroyed, evidently by action of the blood-current and erosion from the sharp edges of the plates. Rupture would have occurred soon and unexpectedly, as well as fatal, into the pleural cavity.

The perforation into the œsophagus easily admitted a lead pencil. Its edges were very thin and beveled, and presented

chronic inflammatory changes. There was no pus, and the small quantity of blood-clot in the sacculated aneurism was laminated. This point was probably the seat of obstruction to swallowing, and with the close adhesion and fusion of contiguous parts, producing compression of the bronchi and pressure and irritation of the vagi and recurrent nerves, thus accounting for the dyspnœa and dry, irritable cough; from the severe paroxysm of coughing, the thinned pathological wall was forced to yield and fatal hæmorrhage the immediate result.

The liver is enlarged and slightly fatty. The gall-bladder is quite small and filled with ochre-yellow bile; ducts pervious.

The vena cava feels like a tube, calcific degeneration; so with the other larger blood-vessels.

Pancreas, stomach, bowels normal; the appendix vermiformis lies along the outer colic surface, its tip even with the umbilicus; it is empty.

Spleen greatly enlarged; soft, pulpy, apoplectic.

Left kidney and ureter normal.

Right kidney enlarged, cystic; besides numerous small cysts, there are two the size of a walnut, one of a hazle-nut, filled with a serous fluid that has neither urinous smell nor taste; pelvis and calyces distended with urine—several ounces (hydronephrosis); no calculi; no pus; ureter pervious.

Bladder normal; prostate much enlarged.

Remarks.—From the history given by the patient, who was quite intelligent, and from the signs and symptoms elicited, it is very evident that the trouble originated years ago in an insidious manner, but continuous and progressive. It is somewhat remarkable that a disease of such nature should develop, apparently, without the usual precursors. However, since venereal and cachectic blood, and other serious infections and rheumatism are firmly negatived, heredity and predisposition absent, we must conclude the trouble resulted from the long-continued work in a constrained position—injury being excluded. The enlarged spleen might point to malarial intoxication, but I believe it due—as a result of the condition of both heart and blood-vessels—to the effect of a long-continued congestion or dammed back blood, a quasi-apoplectic state. It is noteworthy that so few signs of aneurism were present—not one positive. Percus-

sion and auscultation led merely to suspicion; there was no heaving, no thrill, no booming sound, no murmur, no irregular pulse, no marked area of dullness, no irregular pupils, no aphonia.

The fatty places in the lungs plainly showed the effect of the small particles torn from the valves, carried in the blood current to the small pulmonary capillaries, where they became lodged, obstructed the circulation, produced localized anæmia first, and tissue degeneration later on. And how many of these small emboli were carried to the encephalon? The dizziness was doubtless caused by disturbed circulation and nutrition in the brain. The numb fingers and cold extremities indicated some nervous involvement. Was it of central origin, or peripheral neuritis?

The pericardial effusion explained the distant heart-sounds, and might even partly account for the shortness of breath. That the aorta was first affected cannot be doubted—starting, probably, as an endarteritis, or there may have been a mild endocarditis. The smaller arteries were not atheromatous. Another singular feature was the complete absence of œdema, or tumefaction of the extremities and face. The heart was the smallest I ever saw in a subject of the defunct's size, weighing about three to four ounces only; his own weight being 178 pounds; height, 5 feet 7 inches.

296 West Water Street.

Case of Shoulder Presentation—Embryotomy—Death.

By MARK W. PEYSER, M. D., of Richmond, Va.

CHIEF OF GYNÆCOLOGICAL DEPARTMENT OF COLLEGE DISPENSARY.

On November 8th, I was called at 5 A. M. to see a woman in labor. The midwife told me that the bag of waters had ruptured at 12:30 A. M., and that the flow was enormous—the largest she had ever seen.

On making a bi-manual examination, I found first, that the right arm of the child was protruding, and further up, that the right shoulder was presenting. External palpation

demonstrated the child lying in the right side of the mother with its head in her right flank.

The pains were weak ; occurred at long intervals, and had no effect toward expelling the child. Therefore, there was no hope of either spontaneous version or evolution. In fact, there had been no advance since the rupture of the waters.

I immediately attempted to turn, employing Hicks' bipolar method. Failing, chloroform was administered and version again tried with the same result. I then sent for Dr. Jones, of the Retreat for the Sick, and he tried version without avail. We then had recourse to one of two things, embryotomy or Cæsarean section.

Leaving the patient at 8 o'clock, we returned at 11 with Dr. Jas. N. Ellis.

By means of external palpation, Dr. Ellis diagnosed twins, stating that he could feel the head of the second child beneath the mother's diaphragm, and its spinous processes lying along the median line of the abdomen. He then tried to turn, the results being the same as before.

The child being dead, embryotomy was decided upon. First, the protruding upper extremity was removed. Then, by means of a probe-pointed bistoury, covered along its cutting edge for half its length, the abdomen of the child was opened and evisceration accomplished. Afterward, bone forceps were applied, and the lower portion of the body separated from the upper, and delivered without difficulty. The upper portion had to be rotated, so that the head could be extracted.

Then the peculiar feature of the case presented itself. What was supposed to have been the head of the second child was the contracted womb, which was lying beneath the diaphragm, the *child and after-birth having been expelled from the uterus and lying in the vagina*. Still, the child could not be delivered. The expulsion occurred during our absence.

The patient bore the operation well, but on the third day the temperature began to rise, and thence forward continued to fluctuate between 101 and 103 degrees. Peritonitis had set in, probably from an escape of the lochia into the peritoneal cavity through the Fallopian tubes, and on the tenth day she died.

The woman's parts were not at all injured by the use of the knife ; but the long-continued pressure caused paralysis

of the bladder (necessitating removal of the urine), and also sloughing of the internal surfaces of the labia majora.

It was the first child she had brought to term, having had several miscarriages before.

So far as could be determined, the diameters of the pelvis were normal, and the only way in which to account for the mal-position is to attribute it to the excessive amount of amniotic fluid, or that too much movement on the part of the mother caused the child to assume the abnormal posture.

Proceedings of Societies, Boards, etc.

MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

LLEWELLYN ELIOT, M. D., Secretary, Washington, D. C.

MEETING OF DECEMBER 12, 1892.

Dr. James Kerr read a paper on (see page 929)

Laparotomy in Shot Wounds of the Abdomen.

Discussion.—Dr. Carr remarked that this interesting paper leaves little to be said. He wished, however, to endorse the conclusion that in all cases of penetrating bullet wounds, the abdomen should be explored. Statistics are not of much value as yet, because they refer largely to earlier operations when the technique was imperfect. Statistics of recoveries without operation are misleading, because they include many cases where it is doubtful whether penetration of the peritoneal cavity really occurred. Autopsies show conclusively that death is usually due—not to what has been done, but to what has been left undone. Nearly every autopsy of which he had knowledge, taught that more thorough examination and more thorough work will in future give a much larger percentage of recoveries, and show that the cause of death was failure to find and repair some small, but important lesion.

In the fatal case reported to-night, death was probably due to the unnoticed perforation of the under wall of the gall-bladder. Injuries to the liver and gall-bladder are among the most difficult to deal with, but there is at least a possibility that suturing the gall-bladder, as Dr. Kerr sug-

gested, to the peritoneum covering the liver might have saved this patient.

Dr. Keen, of Philadelphia, has reported an interesting case where ligation of a large mesentric artery caused, fifteen days later, sloughing of the intestinal wall. He believes, no doubt correctly, that this patient would have been saved by resection of that portion of the intestine from which the blood supply was cut off. He thought more attention should be called to the fact that ligation of a large bleeding mesenteric artery may require resection of the intestine.

Neither case reported to-night would have recovered without operation—certainly not the latter case with faecal matter, gall, blood, and urine leaking into the peritoneal cavity.

Dr. Chamberlin asked as to the contraction of the pupils.

Dr. Kerr replied: That case recovered. Contraction was present on entrance to hospital; no morphine had been given. There was a large extravasation of bile; does not know whether contraction of the pupils was due to extravasation of bile or not. He asked if any one could give information on this point.

Dr. F. B. Bishop said that the pupil contraction was due to cerebral irritation or to irritation of the third nerve.

Dr. Carr said that the contraction of the pupil was due to paralyzing of the third nerve by stimulation of the sympathetic. In such a case as the one referred to, probably paralysis of both occurred.

Dr. J. Wesley Boveé said that the question of the contraction of the pupil does not arise in all gunshot wounds of the abdomen. He thinks exploration should be done in all cases, as being the least dangerous course to pursue.

Dr. Bishop asked if any germicides were used in flushing the abdomen.

Dr. Kerr replied that no germicides were employed; the flushing was with sterilized salt solution; towels were sterilized by sublimate or sterilizer. He said the success of such an operation depended very much upon intelligent and well-informed assistants.

Dr. Hazen read a paper entitled (see page 905)

A Question Relative to the Treatment of Diphtheria.

Discussion.—Dr. Chamberlin said: He considered diphtheria a local disease at its commencement; and that a diagnosis from the appearance of the membrane, the condi-

tion of the patient, the temperature, with albumin in the urine could pretty surely be made, as they show the difference between the pseudo and true diseases. He does not claim infallibility however. The microscope would in all probability settle the diagnosis in a doubtful case. As he had seen bleeding after the removal of the membrane, and thickness of the membrane very marked in cases of the pseudo variety, he does not accept these as definite indications of the true disease. Accepting as he does the theory of diphtheria being a local disease, he claimed that the membrane should be removed as perfectly as possible before the application of medicines, as this would probably decrease the absorption of the albumin and ptomaine poisons generated about the membrane—not to mention the microbe absorption; and, as a consequence, the severity of the complications might be lessened. He had used in two cases of true diphtheria, which had recovered, the following formula.

Ry.—Tinct. guaiac ammon..... ʒiij
Glycerin..... ʒij—Misce.

The reason for using guaiac was on account of its alterative, diaphoretic, diuretic, and expectorant effects, as well as its stimulating effects on the heart. The glycerin may have produced some good effects on account of its antiseptic and local effect upon the membrane. The membrane is to be removed as far as possible, and the preparation rubbed in every two hours, at the same time giving doses of a drachm-and-a-half. Stimulants and other medicines are to be used as indications arise. The cases treated after this method are too few to base any conclusions upon, but he would suggest the addition of this formula to the already long list of drugs employed in the treatment of this disease.

Dr. Mayfield did not think that, as to the treatment of diphtheria, he could offer anything new, for his methods are indeed rather old-fashioned. He had obtained the best results, so far as the local condition is concerned, by the use of the peroxide of hydrogen and of solutions of nitrate of silver of medium strength, say ten to twenty grains to the ounce of water, used four or five times daily. For the constitutional condition he used, as in scarlet fever, the tinctura ferri chloridi in liberal doses every four hours. As a matter of routine, he directed that the air of the room shall be kept impregnated with the vapor of turpentine, and to effect this a vessel containing water and turpentine is kept constantly boiling in the room. Stimulants are of great ser-

vice in all but the mild cases, and milk is decidedly the most appropriate food. He still clings to the belief that the disease is a constitutional one with local manifestations, rather than the reverse; else how can we account for the marked disturbance of the heart and the great tendency to prostration even in the milder cases, where there is but slight mucous surface involved, and the absorption of toxins must be slight in proportion.

Dr. Carr said that an important question arises here as to what is a local disease. He is in favor of regarding as local any disease in which the germ or contagium is confined to a limited portion of the body and does not enter the circulation, although the poison produced by the germ does enter the circulation and produce general symptoms. In diphtheria, as in abscess, we have a local poison factory which sends out its toxic product to the whole system through the blood and lymph, but the operatives, the germs, do not wander from their local position. On the other hand, in such diseases as typhoid fever, syphilis, and pyæmia, the germ or contagium is found in the general circulation throughout the whole body, and this, in his opinion, constitutes a general disease. In diphtheria, the general symptoms are usually in proportion to the amount of membrane. Not necessarily so, however, for the membrane is not always an index of the number of germs, the activity of the germs, nor even of the area of tissue infected. In the severest cases, with a large area of infection, death may occur without giving time for the formation of much membrane.

Inoculation with diphtheria produces the characteristic lesion only at the point of inoculation. The sequels, particularly the paralysis, may be out of all proportion to the severity of the local lesion. But this does not prove it a general disease; we do not know the cause of these sequels. They are possibly due to the production of anti-toxines—possibly to the direct action of the tox albumen of the bacilli, in which case the insufficient production of anti-toxine would aggravate the symptoms. In any case, idiosyncrasy may be a potent factor in determining the severity of the sequels.

All this does not disprove the fact that the germs are localized, and that we may, by the local use of antiseptics, check their growth to a considerable extent, and thereby modify the severity of the attack. Nor should we lose sight of the fact that death is often caused by septicæmia produced by other germs gaining access to the tissues at the

point of the local lesion, and that this danger may be prevented by the local use of antiseptics. Usually these local applications are not made thoroughly and frequently until the disease is too far advanced to be checked. He has heard Dr. Prentiss say that he never saw the membrane spread after the hourly use of an antiseptic spray had been commenced. He could say the same thing, though his experience was quite limited; but he had seen death occur after such treatment had been commenced without further spread, and because he thought it had not been commenced soon enough.

Dr. Edwin L. Morgan would like to ask Dr. Gray, if he has ever made any experiments with peroxide of hydrogen, as to what strength *per volume will kill bacteria, and especially those of diphtheria*? His reasons for asking are, that so much has been claimed for this chemical preparation, by medical men, who are using various brands of hydrogen dioxide, which are of various strengths per volume, and (this even is found in the same makes), ranging from one and one-half volumes, to seventeen volumes in one case where fifteen were claimed, and in another only twelve where fifteen were claimed.

Roscol and Schorlemmer say hydrogen dioxide is an oily liquid, bitter astringent taste, a very unstable compound, will blister the skin, also produce great irritation, etc. Sulphuric acid is added to make it more stable. From this chemical product is made a very unstable solution of hydrogen dioxide. Acid is added to these solutions to make them more stable, and most brands show a hyperacidity; and even in Marchand's peroxide of hydrogen. Many cases of diphtheria have been claimed to have been aggravated by this solution, which was supposed to be due to hyperacidity of the brand used; a too strong solution could possibly produce like results.

Many medical men, in referring to the strength, etc., of this compound, take satisfaction in calling attention to the "*bubbling*" which may occur in any strength of hydrogen dioxide. His opinion is, we cannot pass an absolutely scientific opinion on this compound until we know the smallest amount that will prevent the development of bacteria—the volume or percentage of hydrogen dioxide. 2nd. We must know that our solution is positively of a certain strength of hydrogen dioxide, and especially chemically pure, also free from hyper-acidity, etc.

In regard to diphtheria, judging from the remarks made

this evening, one would infer, unless the microscope confirmed our diagnoses, we could not be positive, if we were treating diphtheria or another disease. It has been my misfortune to have had twelve to fifteen cases on hand at one time, and a continual run of these cases for a period of two months. He appreciated and recognized the value of the microscope and the labors of the bacteriologist. He had seen some cases resembling those described—some of which were not, strictly speaking, typical cases—others developed marked symptoms in a day or two. Of the former several died, as well those of severe types. As the microscope did not confirm his opinion in these cases, it might have been said he had made an error in diagnosis. One case turned over in bed one week after recovery and died. Second did likewise on the third day and also died. Fourth case, patient ran home at 6 P. M., thirty-one days from commencement of disease, complained of pain in the epigastric region, radiating towards the heart. At 3½ A. M., the mother was awakened by the bed shaking; before she could call help, the boy was dead. Fifth case: Four days after all symptoms had disappeared, throat clean, etc., the child had a fit, and died. Had three cases in the same family—one of whom died from diphtheritic laryngitis. The second boy's face, around right eye, extending down one-half of face, about the sixth day appeared an erythema or erysipelatous blush. The second and third boys, six weeks after, had difficulty in speaking and paralysis of legs. He does not believe in any particular line of treatment. Uses stimulants—iron, quinine, bichloride of mercury internally and locally, trypsin, etc.

3rd. In regard to the mixture of turpentine-water, mentioned by Dr. Mayfield. If there is any preventive, or as near as we can come to one, the mixture is one part of carbolic acid to one of ol. eucalyptus and eight parts of turpentine. Two tablespoonfuls to a pint of boiling water is the best one suggested outside of hygienic measures. When Ward Physician, had ample opportunities to try this mixture. He had three people sleeping in one bed with a case of diphtheria. Only one case occurred in that family. The parents, when on the street, could be detected at five or more feet. Their clothes were impregnated with this solution, and the atmosphere of the whole house.

Besides, it is soothing to the patient to have this medicated steam in the room.

Dr. Joseph T. Howard said, as Dr. Mayfield and Dr

Morgan have remarked, we often find those cases with slight local lesions followed by paralysis and slowness in convalescing. There may be some foci of infection in the trachea where the eye does not see it, and from this the toxins are absorbed.

Again, our success depends upon the age of the patient and his powers of resistance. While in adults and large children, who will assist in the treatment by obedience to orders, from understanding what we require of them, in these we expect recoveries. In babies and unmanageable children, our efforts are often almost useless, and in small tracheas the membrane occludes them and asphyxiates.

He thought Dr. Chamberlin will be disappointed in results following removal of the membrane.

Analyses. Selections, etc.

Severed Fingers Re-applied Seven Hours After Accident with Perfect Union (?) and Recovery of Motion and Sensation.

Dr. J. M. T. Finney, of Baltimore, reported the case to the Clinical Society of Maryland, November 18th, 1892. January 2nd, 1890, a machinist came to the Johns Hopkins Hospital about half-past 12 o'clock. He went to work about 5 A. M.; a little later, while going about a machine used for chopping blocks of tin, he dropped something, and while stooping to pick it up, his hand slipped under the knife and the ends of the middle and ring fingers were cut off. The middle finger was cut off just beyond the last joint. The joint was opened. The ring finger was cut off just above the root of the nail. He wrapped up the stumps and went home, where his wife covered the wounds with beeswax. On arriving at the hospital he produced the stumps of the fingers wrapped up in a piece of newspaper. They were very cold—almost frozen. He placed them in a basin of warm water, using no antiseptic, because bichloride or carbolic acid might cause a layer of coagulation necrosis and prevent union. He scrubbed the stumps of the fingers with a 1:2000 warm bichloride solution, and then carefully rinsed them off in warm water. This process consumed at least half an hour. Then he took a shaving off the ends of the fingers, so as to have a perfectly fresh surface. The stumps were treated in the same manner. The bone was scraped. He sewed them on, using four stitches in each case. Strips of

crepe lisse were then applied with collodion the whole length of the fingers, on each side. These held the severed portions in exact apposition, then other strips were used around the fingers, binding them together, and then applied a palmar splint and used a large absorbent dressing. The patient came back within a week, and the dressing removed; the fingers looked very well. Dr. Finney re-applied the dressing and told him to report in a week. On his return at the end of the second week, Dr. Brockway took out the stitches and removed the dressing, and said there was no doubt but that the fingers had united, and that the man seemed to have sensation at the ends of his fingers, although he thought that this sensation might have been transmitted. The man then disappeared entirely from view. He returned about a month ago with an injury to his other hand. It is difficult to say at first sight which hand was injured. There is a slight motion in the joint which was opened and the sensation in the fingers is perfect.

Dr. Randolph Winslow, about fifteen years ago, was called one day to an upholstress. She had chopped the end of her thumb off with a hatchet, perhaps half an hour before he saw her. Upon making inquiry about the missing piece, he was told it was about the floor somewhere. He hunted it up, cleaned it, put it on with adhesive strips, and it is there to this day. It is important that we should replace these lost parts, for in many cases we will have success. He has a number of times replaced parts which were essentially cut off, attached by a minute portion of skin, with successful union.

Report on Intubation.

Operations by Drs. W. Cheatham and W. B. Pusey, of Louisville, Ky., to November 10th, 1892:

Number done by Dr. W. Cheatham.....	56
Number of deaths.....	34
Number of recoveries.....	22
Per cent. of recoveries.....	39.28
Number done by W. B. Pusey, M. D.	70
Number of deaths.....	37
Number of recoveries.....	33
Per cent. of recoveries.....	47.14
Total (both).....	126
Total number of deaths.....	71
Total number of recoveries.....	55
Per cent. of recoveries.....	43.65

Treatment of Pulmonary Tuberculosis Apart from Climate.

Dr. Karl von Ruck, of Asheville, North Carolina, considers (*Times and Reg.* January 6, 1893) the various remedial agents apart from climate, and urges their painstaking adoption both at climatic resorts and at places without the advantage of a favorable climate. He believes the method of treatment as carried out in the Winyah Sanitarium, under his charge, can be carried out in private practice at least to a degree which would assure improvement and cure in a greater number of cases. The patient is first instructed as to the danger from his expectoration and as to its safe disposition. While exercise is essential and beneficial, it becomes indifferent or a source of danger and a cause for relapses when carried to a degree of sensible fatigue, or when it is taken so rapidly as to produce shortness of breath. Fever is treated by absolute rest and proper diet, and, if necessary, by stimulants and hydropathic applications. Drug antipyretics are entirely avoided. The diet in fever is light; in high fever solid food is entirely avoided; the feeding is frequent, and if patients lose flesh under the regimen, rectal feeding is resorted to in addition. Patients free from fever receive a generous, mixed diet, well cooked, nicely served to the avoidance of pastries and articles of food which in the particular case seem to disagree. In dilatation of the stomach and severe gastric catarrh, lavage and electricity are recommended. Creasote is only given for its influence upon digestive derangements; it has no specific effect upon the tubercular process, the author having demonstrated that the germs grow luxuriantly in blood-serum from patients who were practically saturated by long continued doses of creasote, and that the germs from their sputa produce virulent cultures. As a general tonic and to prevent taking cold, every patient receives before rising a cold water rub with brisk friction thereafter, and in weak heart he uses strychnia in full doses. Cough mixtures are never used; the general management being correct, there is no indication for them. Local pleurisy is treated by rest and counter-irritation. Urine-analysis should be made in all cases where the disease has advanced to destructive changes—amyloid kidney being more frequently found than text-books indicate, and these cases are hopeless. Bloody expectoration is treated by rest, and cough is moderated by codeine. Expectoration of clear blood and more decided hæmorrhage occurred in less than one per cent in his institution, and much less frequently in his private practice, since he has learned to ap-

preciate the detrimental effects of over-exertion. He distinguishes the form due to destructive changes and that which results from over-exertion; rest, diet, ice, ergot, morphia, strychnia and astringent inhalations being considered the most useful.

The author still believes in *tuberculin*, although he was obliged to abandon its more general use in his institution, owing to prejudice both of the profession and of patients. He never saw any disagreeable effects; on the contrary, he witnessed most satisfactory improvement under its use. The pneumatic cabinet is used in a restricted sense, and good results as to better circulation and vital capacity have been observed. Oxygen and ozone are frequently used in connection with ferruginous preparations when anæmia does not yield to the climatic and other influences. Plenty of out-door life is recommended both at home and at the resort.

The paper, being based upon a large experience, can be recommended for study to any physician who treats consumptives.

Mediastinal Disease.

Dr. E. S. McKee, of Cincinnati, Ohio, kindly sends the following notes:

Tuberculosis of the mediastinal glands invading the lungs is reported by Voelcker, who has had three cases, all in children, at the Hospital for Sick Children, Gt. Ormond St., London. He remarks (*Brit. Med. Jour.*, May, 1891,) on the frequency of careous glands in children, having found them present in 110 cases out of the last 300 necropsies he had made at the children's hospital, and expressed a doubt as to their occurrence apart from some tuberculous affection. A remarkable item was that all three cases were under two years of age.

Cancer of the mediastinum is thought by Steven (*Glasgow Med. Jour.*, June and Aug., 1891), in spite of the statistics advanced by Hare, not anything like as frequent as sarcoma of that region, or especially lympho-sarcoma.

An operation for opening the posterior mediastinum has been lately described (*Rev. de Chirurg.*, No. 3, 1891,) and devised by Quenu & Hartmann. A vertical skin incision is made midway between the spinal border of the scapula and the vertebral column. After division of the exposed portions of the trapzins and rhomboid muscles and displacement inwards of the outer border of the sacro-lumbalis, a portion

of the entire thickness of each bone, and about three-quarters of an inch in length, is taken from the third and each of the following ribs. An opening is thus formed nearly five inches in length, and extending from the first rib to the upper border of the sixth. Quenu states that by separating the sides of this wound one can see very clearly the whole of the posterior mediastinum and all the organs it contains. This operation, it is pointed out, is attended with more difficulty and danger on the right side than on the left, because, as was first shown by Braun, the pleura, which, on the left side, passes directly from behind forwards, insinuates itself on the right side between the œsophagus and the vertebral column, in order to reach the aorta. Operative penetration into the posterior mediastinum might, it is thought, be indicated in disease of any organ contained in this part of the thoracic cavity, but is most likely to be needed in cases of impacted foreign body in the lower part of the œsophagus. The anatomical conditions in this operation are not favorable to removal of malignant disease of the gullet, unless the growth is of a very limited extent.

Extraction of Bits of Steel or Iron from the Cornea.

It is not infrequently the case where small bits of iron or steel have been imbedded in the cornea—especially when they have come from a heated piece of metal—that after their removal the corneal wound shows no tendency to heal rapidly, and that the irritation and discomfort of the wound continue. According to Dr. John Dunn, Chief of Clinic of the Richmond, Va., Eye, Ear, and Throat Infirmary, examination of these wounds with artificial light will most frequently reveal at their bottom what at first sight appears to be small bits of the original foreign body. They are not so, however; but are either small areas representing the action of oxidizing iron on the corneal tissue, or are partly burnt corneal tissue. These small areas act as foreign bodies, and the corneal wound shows little tendency to heal as long as they remain. Often, when the corneal wound is deep, they require considerable skill to detach them. At times they may be scraped away; while in other cases, after detaching them, they have to be cut off with a small pair of scissors. They should be carefully sought for after the extraction of every piece of steel.

Book Notices.

Fermentation, Infection, and Immunity—A New Theory of These Processes. By J. W. McLAUGHLIN, M. D., Austin, Texas. Copyright. 1892. Small 8vo. Pp. 240. Cloth. Price, \$2.50. (For sale by Author.)

The author styles his "new theory of these processes" "the physical theory," which, he thinks, "unifies their primary causation, and places the explanation of their phenomena in chemistry, biology, and the dynamics of molecular physics." The book is defective in that it nowhere gives a distinct summary of the theory so as to be stated in a sentence or two. Probably its best statement occurs on pages 219 and 220, after considering the subject of fermentation, as follows: "It was found that the laws of matter and motion, legitimately applied and interpreted, were able to explain all the phenomena of fermentation, and to harmonize and explain all the phenomena of infection," as well as immunity from infection. To present his theory more distinctly, so as to leave a clearer conception of it upon the mind of his readers, the author should eliminate from future editions a great deal of the tedious verbiage. About one-fourth of the present edition is composed of verbatim quotations, where, in many instances, a simple gist of them would have been ample.

Treatise on Diseases of the Rectum, Anus, and Sigmoid Flexure. By JOSEPH M. MATHEWS, M. D., Professor of Principles and Practice of Surgery, and Clinical Lecturer on Diseases of the Rectum Kentucky School of Medicine, etc. *With Six Chromo-Lithographs and Numerous Illustrations.* New York: D. Appleton & Co. 1892. Cloth. 8vo. Pp. 537. (Sold only by subscription).

We must recommend this book to every practitioner, whether of special or general practice—as the record of one who knows what he is writing about. It stands out prominently as the one original book of the many published on the subjects named in the title—confirming what is common experience, exploding many of the necessarily wrong theories and practices as tested in the crucible of experience and observation, and presenting practices which have the endorsement of successful results of operation or treatment. The book describes and teaches just as if the Professor were lecturing and demonstrating on a case in hand the various

diagnostic points and the most simple and successful plans of treatment. The author lays great stress upon the initial examination of the rectum and related parts, and for this purpose he uses the Nedofik Sofa, which he says is the best chair or lounge for all rectal examinations. His chapter on "Nervous Rectum" is presented, the author says, to undo the wrong which he thinks Prof. Goodell's teachings have scattered. He includes the sigmoid flexure in his considerations, because he has found that part of the intestine so commonly involved in many obscure cases of rectal disease.

Index Catalogue of the Library of the Surgeon-General's Office, U S Army Authors and Subjects. Vol. XIII. Washington. 1892. Cloth. 4to Pp. 1065-16. (From Surgeon-General, U. S. Army.)

This Catalogue, being compiled under the direction of Surg. John S Billings, is becoming invaluable to any one who is in search of what has been published on any medical subject. Vol. XIII (Sialagogues—Sutgin inclusive) contains 9,751 author titles, representing 4,313 volumes, and 6,806 pamphlets; also 13,498 subject-titles of separate books and pamphlets and 29,896 titles of articles in periodicals.

Ready-Reference Hand-Book of Diseases of the Skin. By GEORGE THOMAS JACKSON, M. D., Chief of Clinic, and Instructor in Dermatology, College Physicians and Surgeons, New York; Professor of Dermatology in Woman's Medical College of N. Y. Infirmary, etc. *With 50 Illustrations.* Philadelphia: Lea Brothers & Co. 1892. 12mo. Pp. 553. Cloth, \$2.75.

The author has studied utility in the alphabetical arrangement of the different diseases (with their French and German synonyms), which he presents with special reference to their symptomatology, diagnosis, and treatment. The pronunciation is according to Foster's *Dictionary*. In the prescription formulæ, while the old signs of scruple, drachm, etc., are preserved in many, it is specially noted that the decimal form has been adopted for all. So that instead of translating in all cases scruples, drachms, and ounces into the decimal nomenclature, it is left for the reader in many instances to translate the decimal formulæ into the old nomenclature, which will in a few years become obsolete. Indeed, it would be difficult to indicate a work on skin diseases more exactly suited to the daily needs of the practitioner as well as student. The introductory chapters on diagnosis and therapeutic notes are most excellent.

Memoranda of Poisons. By THOMAS HAWKES TANNER, M. D., F. L. S. Seventh American, from last London Edition. *Revised by* JOHN J. REESE, M. D., Late Professor Medical Jurisprudence and Toxicology in University of Pennsylvania. Philadelphia: P. Blakiston, Son & Co. 1892. Cloth. 16mo. Pp. 177. Price 75 cents. (For sale by West, Johnston & Co., Richmond).

The demand for a new edition of this familiar little book has allowed an opportunity to introduce new chemical nomenclature, and to leave out some obsolete chapters so as to make room for new material. The index is very complete, and enables one to make ready reference. It is, indeed, a useful, comprehensive book of memoranda for any practitioner.

Contributions of Physicians to English and American Literature. By ROBERT C. KENNER, A. M., M. D., of Louisville, Ky. Pp. 92.

Acne and Alopecia. By L. DUNCAN BULKLEY, A. M., M. D., of New York. Pp. 85.

Fissure of the Anus and Fistula in Ano. By LEWIS H. ADLER, JR., M. D., of Philadelphia. Pp. 78.

These are successive monthly numbers of the "Physician's Leisure Library," published by Geo. S. Davis, Detroit, Mich., now so familiar to the profession. Price 25 cents each; or annual subscription, \$2.50. Each of the above is a good monograph, but as being somewhat out of the usual order of publications, we found the first named specially entertaining and quite instructive.

Diseases of the Lungs, Heart, and Kidneys. By N. S. DAVIS, JR., A. M., M. D., Professor of Principles and Practice of Medicine, Chicago Medical College; Physician to Mercy Hospital, etc. *No. 14 of Physicians' and Students' Ready-Reference Series.* Neat 12mo. Pp. 359. Extra Cloth, \$1.25 net. Philadelphia: The F. A. Davis Co., 1231 Filbert street.

This is a most valuable work for the busy practitioner. Very little of theoretical discussion is indulged, but the plain matter of fact clinical observations and deductions of an able physician are given. The therapeutic part is especially full, and useful combinations are given in almost every section in relation to matters of treatment. The book contains thirty-seven chapters on as many distinct diseases of these organs. Phthisis is not discussed.

Diseases of the Kidneys and Bladder. *A Text-Book for Students of Medicine.* By W. F. McNUTT, M. D., F. R. C. S. Ed., L. R. C. P. Ed. Professor Principles and Practice of Medicine, University of California; Professor of Diseases of the Kidneys and Heart, Post-Graduate Department University of California, etc. Philadelphia. J. B. Lippincott Co. 1893. Small 8vo. Pp. 242. Cloth, \$2.50. (For sale by West, Johnston & Co., Richmond).

For the general practitioner, who has not the opportunity of referring his suspicious cases to the specialist, but who has often to do his own surgery, we must rank this as about the best manual we know relating to the diseases named in the title. The author, like the good doctor, devotes almost his entire attention to diagnosis and to details of treatment—introducing even a full chapter on surgery of the kidneys. It must not be understood that the work treats of urinary diseases in the totality, but of the organs specially concerned in its secretion and elimination. Thus nothing at all is said of the urine of jaundice, of gout, of lithæmia, of neurasthenia, etc. The urinalysis concerns simply the diseases of the *organs*. With reference to Bright's disease, diabetes, etc., the author speaks only as a practitioner in diagnosing and treating such diseases. And yet enough of the chemistry, microscopy, etc., of the urinary secretion is given to enable the doctor to make practical examinations, and thus help him in questions of diagnosis.

Diseases of the Chest, Throat, and Nasal Cavities, including Physical Diagnosis and Diseases of the Lungs, Heart, and Aorta, Laryngology and Diseases of the Pharynx, Larynx, Nose, Thyroid Gland, and Esophagus. By E. FLETCHER INGALS, A. M., M. D., Professor of Laryngology and Practice of Medicine, Rush Medical College; Professor of Diseases of Throat and Chest, Northwestern University Woman's Medical School; Professor of Laryngology and Rhinology, Chicago Polyclinic, etc., etc. *Second Edition, Revised and Enlarged* 240 Illustrations. 8vo., 700 pages, Extra muslin. Price, \$5. William Wood & Co., New York.

The scope and the special merits of this work are such as to make it equally serviceable to the specialist in throat diseases, etc., and to the general practitioner. A great deal of attention is given to differential diagnosis and to points of treatment; so that we are rather surprised to see no reference to Dr. Joseph A. White's palate retractor—now so almost universally commended and adopted—and Dr. W. W. Parker's simply made plug for epistaxis. In very many respects this edition is a new work as compared with the

first edition. The sections relating to throat and nasal diseases have been rewritten. The work also includes many of the general diseases with which the specialist has but little to do in daily treatment—such as ordinary pulmonary phthisis, pertussis, heart diseases, aneurisms, etc. The appendix is rich in therapeutic formulæ—valuable alike to the general practitioner and the specialist. So that this is the one book that both laryngologists, etc., and general practitioners should have. It is useful, practical, and up to date.

Over 1,000 Prescriptions and Favorite Formulæ from Authors, Professors, and Practicing Physicians Cloth. 12mo. Post-paid. \$1.00. *The Illustrated Medical Journal Co., Detroit, Mich.*

The formulæ in this volume are *practical prescriptions* of new and old remedies for various diseases; *they are the favorite ones* of various authorities. The *Index* is full, thus rendering the book one for ready reference. The volume is copiously interleaved, so that on the blank pages can be recorded, by pasting or copying with pen or pencil, any other prescription suitable for any disease that is on the opposite page; the Index thus also indexes new formulæ which one may see fit to copy into the volume. This handy cloth-bound book of nearly 300 pages, will be mailed upon receipt of price by the publishers.

Kirkes' Hand-Book of Physiology By W. MORRANT BAKER, F. R. C. S., late Surgeon, and Lecturer on Physiology at St. Bartholomew's Hospital, etc.; and VINCENT DORMER HARRIS M. D. F. R. C. P., Examiner in Physiology at the Conjoint Board, R. C. P. and S., and in University of Durham etc. *Thirteenth Edition, with upwards of 500 Illustrations, including some Colored Plates* Philadelphia: P. Blakiston, Son & Co. 1892. Cloth. Demi Svo. Pp. xiv+814.

The students of twenty-five years ago, who used "Kirkes' Physiology" as their text-book, would not recognize the present edition as even an attempt to preserve anything connected with the editions of that day. In fact, it seems rather unfortunate that the old name should be preserved, now that Dr. Kirkes has nothing to do with the preparation of the work, and as what is remembered of his teachings in his day needs relearning now. Progress in physiology has been so rapid and changes in nomenclature and in methods have been so radical—all of which are well illustrated in the present edition—that it would have been more popular

had this work been issued under a distinctive title. If the reader dismisses the idea that this book is not the teaching of Dr. Kirkes, but is a completely new book, and fully up to date, he will get a better idea of the value of this most excellent text-book; for, as a text-book for students and practitioners of medicine, it contains clear and ample descriptions and teachings. In short, it is a text-book for which there ought to be great demand. The publishers have done their part very nicely.

Text-Book of Ophthalmology. By DR. ERNEST FUCHS, Professor of Ophthalmology in University of Vienna. *Authorized Translation from the Second Enlarged and Improved German Edition.* By A. DUANE, M. D., Assistant Surgeon Ophthalmic and Aural Institute, New York. *With Numerous Illustrations.* New York: D. Appleton & Co. 1892. Cloth. 8vo. Pp. xiii—788.

According to the estimate placed upon this work by specialists, it is the best of text-books on ophthalmology. It covers thoroughly the whole subject, so far as it is practicable for one volume to do so. The discussions and descriptions are all written from the practical standpoint of study, and this eliminates many of the errors of past teachings, and introduces many new things relating alike to diagnosis and treatment, whether surgical or therapeutical. The wonderful lack of information by the usual run of doctors about even the commonest of eye troubles is simply appalling, especially where there are not specialists in practice to whom eye cases can be promptly referred. This book, so accurate and so complete, is the treatise that ought to be carefully read. Even with the limit of space compulsorily allowed to book *notices* in this issue, we cannot close without specially commending the magnificent translation work done by Dr. Duane. We have seldom seen its equal in perfection. It cannot be excelled.

Manual of the Practice of Medicine. By A. A. STEVENS, A. M., M. D., Instructor of Physical Diagnosis, University of Pennsylvania; Demonstrator of Pathology in Woman's Medical College, Philadelphia, etc. *Illustrated.* Philadelphia: W. B. Saunders. 1893. Cloth, 12mo. Pp. 501. Price, \$2.50.

The author has compiled from the latest and best authorities about the most useful *manual for practitioners* as well as for students that we know of. Everywhere he has kept in view the practical clinical needs of the doctor and student, and has introduced the best of therapeutic advices given

by the best of the many authors from whose works he has prepared this book. Of course, all the statements are synoptical, and yet sufficiently complete to prevent ambiguity or misinterpretation. The index covers 11 pages, and is very full. As a *manual on Practice*, we most unreservedly commend this work.

Treatise on Nervous and Mental Diseases. By LANDON CARTER GRAY, M. D., Professor of Nervous and Mental Diseases in New York Polyclinic, Ex-President of the American Neurological Association, etc. Handsome 8vo. 681 pages. With 168 fine Engravings. Cloth, \$4.50; Leather, \$5.50. Philadelphia: Lea Brothers & Co. 1893.

The scope of this treatise covers all that a handy volume can be expected to contain. The chapters on Anatomy of the Brain and on Localization of Brain Centres are well up with the present state of ascertained facts, and are invaluable to the surgeon. Indeed, the entire work is written from the standpoint of the practitioner; hence its thoroughly practical cast. Illustrations are liberally used throughout, and many of them are original. Special attention is everywhere given to points of diagnosis, and of treatment of the neurological diseases and disorders. A great deal of the book possesses the value of record of personal experience. All in all, this is a good text-book for the student; an excellent guide-book for the practitioner; and a valuable reference-book for the professor, or for him who is preparing a paper or a book on nervous diseases. The author calls attention to a novel feature in a work of this kind, which is the inclusion of the medico-legal aspects of nervous and mental diseases.

Syphilis and the Nervous System By W. R. GOWERS M. D., F. R. C. P., F. R. S., Physician to National Hospital for the Paralyzed and Epileptic, etc. Philadelphia. P. Blakiston, Son & Co., 1892. Cloth. 12mo. Pp. 131. Price, \$1. (For sale by West, Johnston & Co., Richmond.)

This little volume is "a revised reprint of the Lettsomian Lectures for 1890, delivered before the Medical Society of London"—thus bringing the lectures up to the level of our present knowledge concerning the nervous-disease manifestations of syphilis. Contrary to the teachings of the majority, Dr. Gowers opposes the indefinite prolonged uses of iodide of potash or of mercury on the ground that their indefinite administration is more dangerous, etc. He thinks

syphilis is incurable—however latent it may appear. He urges, as the only preventive remedy, absolute chastity. No one can carefully read this book without receiving much valuable information and many practically important suggestions.

Notes on the Newer Remedies—Their Therapeutic Applications and Modes of Administration. By DAVID CERNA, M. D., Ph. D., Demonstrator of Physiology Medical Department University of Texas, etc. Philadelphia: W. B. Saunders. 1893. Cloth. Demi 8vo. Pp 177. Price, \$1.25.

There is need for just such a work—only a little fuller. The “notes” are almost simply “catch words,” on which the sentences are to be built into paragraphs. But these “Notes” are very valuable just now, because so many new agents have got into practice through advertisements and journal-mentions about which nothing is as yet “in the books.” This collection of facts and statements renders the volume of great service to practitioners and to pharmacists. It of necessity will be a book to which frequent reference will have to be made.

The Modern Antipyretics—Their Action in Health and Disease. By ISAAC OTT, M. D., Former Lecturer on Experimental Physiology, University of Pennsylvania, etc. *Second Edition*—Revised and Enlarged. Easton, Pa: E. D. Vogel, Bookseller. 1892. Paper. 8vo. Pp. 125. Price, not stated.

The first edition (52 pages) was issued scarcely a year ago, and yet the occasion for a second edition so early allows an opportunity to introduce many new antipyretics and a much fuller discussion of the principles governing the action of these agents. Dr. Ott brings out the relative as well as the special benefits of each of these agents, and presents a monograph of great utility to the practitioner.

For Frosted Feet, etc.—Dr. W. S. Cline, of Woodstock, Va., sends the following prescription, which he says “is worth its weight in gold.” It will relieve “frosted feet” as promptly as morphia will pain:

R. Carbolic acid.....	ʒj
Tinct. iodine.....	ʒij
Tannic acid.....	ʒj
Simple ointment.....	ʒiv

M. S.: Apply twice a day.

Editorial.

Woman's Medical Education in Johns Hopkins University.

During October, 1890, the Board of Trustees of Johns Hopkins University provided that the Medical School would be opened when a general fund had been accumulated for its establishment and maintenance amounting to not less than \$500,000. Up to December 24, 1892, the sum accumulated amounted to about \$193,000. Then Mrs. Mary Elizabeth Garrett, of Baltimore, Md., placed at the disposal of the Board of Trustees \$307,000—enough to make up the \$500,000—*provided*, in brief, that women medical students shall have all the privileges and benefits accorded male students, etc. This proposition was at once officially accepted, and the Board now announce that the Medical School will be opened for students during October, 1893. This school, it is believed, because of its connection with Johns Hopkins Hospital and its now ample endowment, will “afford to the women and men of this country, whose acquirements and training may enable them to enter upon its course of instruction, unsurpassed opportunities for the scientific study of medicine.”

Sixth Session of National Association of Railway Surgeons.

We have received the preliminary announcement of the special programme of the Sixth Annual Meeting of the National Association of Railway Surgeons, embracing U. S. of America, Dominion of Canada, and Republic of Mexico, to be held in Omaha, Neb., the last Wednesday, Thursday and Friday of May, 1893. The President, Dr. Chas. W. P. Brock, of Richmond, Va., and the Secretary, Dr. E. R. Lewis, of Kansas City, Mo., deserve great credit for their earnest and effective work. The general subject for discussion is *Injuries of the Cord and its Envelopes Without Fracture of the Spine*; and the following divisions, etc., have been made:

History, by Dr. Geo. Ross, Chief Surgeon R. & D. R. R., Richmond, Va.

Anatomical Landmarks, by Dr. Jabez N. Jackson, Surgeon Wabash R. R., Kansas City, Mo.

Physiology of the Spinal Cord, by Dr. A. P. Grinnell, Chief Surgeon Central Vermont R. R., Burlington, Vt.

Experimental Research, by Dr. B. A. Watson, Surgeon Pennsylvania R. R., Jersey City, N. J.

Experimental Study of Spinal Myelitis and Meningitis, by

Dr. Geo. A. Baxter, Div. Surg. Chat. South. R. R., Chattanooga, Tenn.

Clinical Aspects of Spinal Localization, by Dr. Nicholas Senn, Surg. Ch., St. P. & Kan. City R. R., Chicago, Ill.

Diagnosis from the Standpoint of the Neurologist, by Dr. C. H. Hughes, Cons'l't'g Surg. Mo. Pacific R. R., St. Louis, Mo.

Pathology and Pathological Anatomy, by Dr. Samuel C. Benedict, Surg. R. & D. R. R., Athens, Ga.

Prognosis, by Dr. Samuel S. Thorn, Chief Surg. Toledo, St. L. & Kan. City R. R., Toledo, O.

Treatment, by Dr. W. B. Outten, Chief Surg. Mo. Pacific R. R., St. Louis, Mo.

Medico-Legal Aspects, by Judge J. H. Collins, Chief Counsel B. & O. R. R., West of Ohio river, Columbus, O.

Statistics of Amount of Money Paid by Railroads of United States during last Ten Years, for Alleged Injuries of Spine, by Dr. F. K. Ainsworth, Surg. Southern Pacific R. R., Los Angeles, Cal.

Clinical Report.—1. *From a Medical Aspect*; (a) *Permanent Injuries*; (b) *Alleged Injuries*. 2. *From a Legal Aspect*; (a) *Settled with Suit*; (b) *Settled Without Suit*; (c) *Miscellaneous*, by Dr. Geo. Chaffee, Surg. L. I. R. R. Brooklyn, N. Y.

Section on Railway Surgery—Pan-American Medical Congress.

The first Pan-American Medical Congress is to be held in Washington, D. C., U. S. A., September 5th—8th, 1893. Having organized a "Section on Railway Surgery," the Executive President of the Section, Dr. C. W. P. Brock, of Richmond, Va., directs the attention of the Railway Surgeons of the Western Hemisphere to the following regulations: Contributors are required to forward abstracts of their papers, not to exceed six hundred words each, to the Secretary-General, Dr. Charles A. L. Reed, No. 311 Elm street, Cincinnati, Ohio, U. S. A., not later than July 10, 1893. These abstracts will be published in advance of the meeting, and no paper will be placed on the programme which has not been thus presented by abstract. Abstracts must be forwarded through the Secretary of the Section. The officers for this Section appeal to the Railway Surgeons of all the Americas to make such response to this request as will insure the success of the Section on Railway Surgery. The Secretaries are: Dr. E. R. Lewis (English-Speaking), Kansas City, Missouri, U. S. A.; Dr. Pirovano, Buenos Ayres, Argentine Republic; Dr. T. G. Roddick, Montreal, Canada; Dr. Hernandez, La Paz, Bolivia; Dr. Francisco G. Guzman,

Santiago, Chile ; Dr. Regino Gonzalez, (Cordovanes No. 4), Mexico, Mexico ; Dr. Juan J. Ortega, Guatemala, Guatemala ; Dr. Abraham Aparico, Bogota, Republic of Columbia ; Dr. Lucas A. de Catta Preta, Rio de Janeiro, U. S. of Brazil ; Dr. Lino Alarco, Lima, Peru ; Dr. Jose Pugnalin, Montevideo, Uruguay ; Dr. Pedro Maria Gracia, Caracas, Venezuela.

Medical journals are requested to give this publication.

Dr. Chas. G. Cannaday's Sanitarium for the Treatment of Surgical and Female Diseases,

Known as "Rebekah Sanitarium," in Roanoke, Va., is a step in the right direction, and, we feel sure, will be appreciated and supported by the profession. Dr. Cannaday has combined the advantages in his line to be found in this and European countries. He is a close student, has prepared himself for his work by special courses under the best masters in America and abroad, and is thoroughly identified with the interests of his profession.

The advertisement of "Rebekah Sanitarium" begins in this issue.

To find advertisements, examine the "Index to Advertisers," on card-board between advertising pages 32 and 35.

Dr.. Bernard Wolff,

After spending a pleasant Summer and Fall in Germany and London, England, perfecting himself in special courses, returned to Heidelberg about Dec. 1st, 1892. Dr. Unna—the world-famed dermatologist of Hamburg (who moved over to Heidelberg on account of the cholera in the former city last summer) made Dr. Wolff his Assistant. Few of our American young men ever enjoyed such a compliment from abroad. During the Spring of 1893, Dr. Wolff expects to return to Paris, as he will see more Clinics there ; and next Winter he expects to

The Tilden Co., of New Lebanon, N. Y.,

Successors to the formerly well-known firm of Tilden & Co., is again in the field, with their most reliable preparations, which they guarantee to be made up to the highest standard, and which are worthy of approbation. The preparation of fluid extract of ergot was known and esteemed highly by practitioners all over the country who used it ; and this is one of the preparations which they are about to reintroduce.

Officers—Elect of the Medical Society of the District of Columbia.

At a meeting of the Medical Society of the District of Columbia, held January 2nd, 1893, the following officers were elected for the ensuing term: *President*, Dr. G. Wythe Cook; *Vice-Presidents*, Drs. Llewellyn Eliot, J. H. Mundell; *Treasurer*, Dr. C. W. Franzoni; *Corresponding Secretary*, Dr. Thos. C. Smith; *Recording Secretary*, Dr. Samuel S. Adams; *Librarian*, Dr. Edwin L. Morgan; *Board of Examiners*, Drs. C. H. A. Kleinschmidt, W. Sinclair Bowen, Samuel S. Adams, George N. Acker, George C. Ober; *Board of Censors*, Drs. C. W. Richardson, Ernest F. King, John T. Winter.

The Jones Car Company,

To which we alluded in our January number, have patents upon their improved devices for vestibule sleeping-cars in Canada, and have a proposition from a former resident of Colorado, now residing in Canada, for the purchase of the Canadian patents, on which to form a company to operate these patents in the Canadas, and to put \$500,000 in cash in the Canadian Company, the backers of which are affiliated with the Grand Trunk and Canadian Pacific roads. The stock of the Jones Vestibule Sleeping-Car Company will advance to 60 cents on February 15th, through the Company's agents, H. E. Woods & Co., Denver, Colorado.

Transactions of the Medical Society of Virginia.

The *Transactions* for the Session of 1892, recently issued, possesses a unique feature, which seems to be attracting widespread favorable comment. We refer to the "*Biographical Register*" of its Fellows. Dr. J. M. Toner, of Washington, D. C., voluntarily writes us that this feature is an improvement on anything he has ever seen. While the design is very pleasing and useful, we trust that all Fellows, while the matter is fresh in memory, will at once make out more satisfactory memoranda, and forward the same to the Recording Secretary of the Society, Dr. Landon B. Edwards, Richmond, Va., in order that he may compile even better records at his leisure, during the year, for incorporation in the Volume of *Transactions* for the Session of 1893 in Charlottesville next October.

VIRGINIA MEDICAL MONTHLY.

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RICHMOND, MARCH, 1893.

Original Communications.

ART. I.—Certain Animal Extracts—Their Mode of Preparation and Physiological and Therapeutical Effects.*

By WILLIAM A. HAMMOND, M. D., of Washington, D. C.,

SURGEON-GENERAL U. S. ARMY (RETIRED); LATE PROFESSOR OF DISEASES OF THE MIND AND NERVOUS SYSTEM IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, ETC.

Gentlemen,—I wish I could believe all the pleasant things that my friend, Professor Roosa, has, in the goodness of his heart, just said about me. There are two expressions of his, however, which I know to be true. First, I scarcely need any introduction here, for, though I have been away from you for more than four years, I feel that I am, if only for an hour or so, back among my own people, and I experience something of the emotions of the captain who walks the quarter-deck of his ship. Second, I am one of the founders of this School. I shall always regard that fact as the most honorable of all the events of my professional life—the one in which I take the most pride. The excellence

* A Lecture delivered at the New York Post-Graduate Medical School and Hospital January 16th, 1893.

of the work done here by the Faculty, and the phenomenal success that has attended upon their labors, are circumstances of which they may well feel a justifiable elation, and in which emotion I claim the right to share.

But I am not here to-day to speak of the triumphs of this School. I want to tell you of some of the work upon which I have been engaged since I left you, and the story will, I think, interest a body of physicians like yourselves, who come here to learn new facts, and thus to keep abreast with the progress of the age.

You remember that, about three and a half years ago, Dr. Brown-Séquard electrified the medical and non-professional world by announcing that the expressed juice of the testicles of the guinea-pig was an agent capable, when injected into the blood, of arresting, to some extent, the inroads of old age, and of curing certain diseases to which mankind is subject. I at once entered upon a series of investigations of the matter, some of the results of which are published in the *New York Medical Journal* for August 13th, 1889. I became convinced that we had, in the juice of the organs in question, a means of acting upon the body in a manner and to an extent different from that of the effects of any other substance previously known to medical science.

But, though surprising in its action, I found that there were certain practical difficulties in the way of the fresh testicular juice ever becoming of general use in actual practice.

In the first place, it had to be used fresh; for if not, there was great danger of a putrefactive process being set up, and blood-poisoning produced; and this was the result in several cases in which it was used in this country. In large cities, there is almost an impossibility of getting the organs in question immediately on their being removed from the animal.

Secondly, it was extremely difficult to filter the thick juice, even when diluted, according to Brown-Séquard's directions. Filtering paper would not do, for the morphological constituents passed through, and an abscess was very

liable to be produced at the point of injection. A porous stone-filter absorbed the juice, and none of it came through, as there was never a sufficient quantity to saturate the stone and to pass through it. A large amount could not properly be made at one time, as it would not keep; so that it was necessary, at every *séance*, to prepare a fresh quantity.

After a time, therefore, during which I did my best with the fresh juice—using for this purpose the testicles of the ram and creating several abscesses with febrile disturbance—I gave up this method, and turned my attention to preparing extracts, not only of the testicles, but of other organs of the body. It would be to some extent instructive to go over my failures, but I have not time for that. I can only, on this occasion, tell you of my success and the conclusions I have arrived at in regard to the subject. And I shall mainly confine my remarks at present to the consideration of one extract—that of the brain—which, for convenience, I designate "*cerebrine*." I will merely say that I have prepared extracts also of the spinal cord—"medulline;" the testicles—"testine;" the ovaries—"ovarine;" the pancreas—"pancreatine;" the stomach—"gastrine," and the heart—"cardine," and that I am nearly ready to give to the profession the results of my observations with these substances. Of course the kidneys and the liver being excretory organs, cannot properly be used for the purpose of making extracts to be introduced into the blood. Were we to use them in this manner, we should be putting back into the system poisons which it had eliminated, and hence would produce disaster, and, perhaps, even death.

The process of preparation of the extract of these several organs, while individually somewhat different, does not materially vary from that used for the brain, which is as follows:

The whole brain of the ox, after being thoroughly washed in water acidulated with boric acid, is cut into small pieces in a mincing machine. To one thousand grammes of this substance placed in a wide-mouthed glass-stoppered bottle, I

add three thousand cubic centimetres of a mixture consisting of one thousand cubic centimetres each of a saturated solution of boric acid in distilled water, pure glycerin, and absolute alcohol. This is allowed to stand in a cool place for at least six months, being well shaken or stirred two or three times a day. At the end of this time, it is thrown upon a porous stone-filter, through which it percolates very slowly, requiring about two weeks for entirely passing through. The residue remaining upon the filter is then enclosed in several layers of aseptic gauze, and subjected to a pressure of over a thousand pounds, the exudate being allowed to fall upon the filter and mixed with a sufficient quantity of the filtrate to cover it. When it has entirely filtered, it is thoroughly mixed with the first filtrate, and the process is complete.

During the whole of this manipulation, the most rigid antiseptic precautions are taken. The vessels and instruments required are kept in boiling water for several minutes, and are then washed with a saturated solution of boric acid. Bacteria do not form in this mixture under any circumstances, but it is necessary to examine it, from time to time, microscopically, in order to see that no foreign bodies have accidentally entered. Occasionally, owing to causes which I have not determined, though I think it is due to variations in temperature, the liquid becomes slightly opalescent from the formation of a flocculent precipitate. It sometimes takes place in a portion of the extract kept under apparently identical conditions with other portions that remain perfectly clear. It can be entirely removed by filtration through Swedish filtering paper, previously sterilized, without the filtrate losing anything of its physiological or therapeutical power.

Five minims of this extract, diluted at the time of injection with a similar quantity of distilled water, constitute a hypodermic dose.

The most notable effects on the human system of a single dose are as follows—though in very strong, robust and large

persons, a somewhat larger dose is required, never, however, exceeding ten minims—

1. The pulse is increased in the course of from five to ten minutes, or even less in some cases, by about twenty beats in a minute, and is rendered stronger and fuller. At the same time, there is a feeling of distension in the head, the perspiration is largely increased, the face is slightly flushed, and occasionally there is a mild frontal, vertical, or occipital headache, or all combined, lasting, however, only a few minutes.

2. A feeling of exhilaration is experienced which endures for several hours. During this period the mind is more than usually active, and more capable of effort. This condition is so well marked that if a dose be taken about bedtime wakefulness is the result.

3. The quantity of urine excreted is increased, when other things are equal, by from 8 to 12 ounces in the twenty-four hours.

4. The expulsive force of the bladder, and the peristaltic action of the intestines, are notably augmented, so much so that in elderly persons, in whom the bladder does not readily empty itself without considerable abdominal effort, this action is no longer required, the bladder discharging itself fully and strongly, and any existing tendency to constipation disappears, and this to such an extent that fluid operations are often produced from the rapid emptying of the small intestine.

5. A decided increase in the muscular strength and endurance is noticed at once. Thus, I found in my own case that I could "put up" a dumb-bell weighing forty five pounds fifteen times with the right arm and thirteen times with the left arm, while after a single dose of the extract I could lift the weight forty-five times with the right arm and thirty-seven times with the left arm.

6. In some cases, in elderly persons, an increase in the power of vision is produced, and the presbyopic condition disappears for a time.

7. An increase in the appetite and digestive power. Thus

a person suffering from anorexia and nervous dyspepsia is relieved of these symptoms, temporarily at least, after a single dose hypodermically administered.

These effects are generally observed after one hypodermic injection, and they continue for varying periods, some of them lasting for several days. In order that they may be more enduring, two doses a day should be given every day, or every alternate day, as may seem necessary—one in the morning and one in the afternoon—and kept up as long as the case under treatment seems to require. The most notable effects are seen in the general lessening of the phenomena accompanying advancing years. When some special disease is under treatment, the indications for a cessation of the injections will be sufficiently evident, either by an amelioration or cure.

To the substance obtained in this manner, and held in solution, I have given, as stated, the name of "*cerebrine*," as the one, in view of its origin, most appropriate.

I have employed the solution of "*cerebrine*" with curative effects in many diseases of the brain and nervous system. It is almost specific in those cases of *nervous prostration*—the so-called *neurasthenia*—due to reflex causes or excessive mental work, or persistent and powerful emotional disturbance—a hypodermic injection of five minims, twice daily, continued for two or three weeks, and without other medicine, being sufficient to produce cure. It has proved equally effectual in cases of cerebral congestion, in which the most prominent symptom was *insomnia*, sleep being produced usually in the course of two or three nights. I have also employed it successfully in *migraine*, *hysteria*, *melancholia*, *hebephrenia*—the mental derangement occurring in young people of either sex at the age of puberty—in old cases of *paralysis*, the result of cerebral hæmorrhage. In *neuralgia*, *sciatica*, and in *lumbago*, it has acted like a charm, except in one case of facial neuralgia, in which it did not appear to be of the slightest service.

I have employed it in eleven cases of *epilepsy*. Three of these were of the *petit mal* variety; in two the effect has

been so marked that I am not without the hope that cures will result, although I am not able, as yet, to speak positively on this point, the patients having been less than a month under treatment. In the other, no influence appeared to be produced.

Eight cases were of the *grand mal* variety. In two of these the number of paroxysms has been reduced more than one-half, and greatly mitigated in severity. In six other cases, which were of long duration, I could perceive no curative effects.

In a case of *general paresis* no therapeutical influence was apparent beyond that of arresting the delusions of grandeur for a few days. In a case of *hebephrenia*, however, occurring in the person of a young lady eighteen years of age, the effect has been most happy, the symptoms entirely disappearing in a little more than a month's treatment.

In several cases of *nervous prostration*, the result of long-continued emotional disturbance, and in which there were great mental irritability, dyspepsia, physical weakness, loss of appetite, and constipation, relief was rapidly afforded. In three other cases in which the most notable symptom was *functional cardiac weakness*, the effect has been all that could have been desired. In these cases it was employed in conjunction with "cardine," the extract of the heart of the ox, made in the manner already described.

It is not my intention, at the present time, to bring before you all the points of this interesting subject, or to allude further to experiments in the treatment of other diseases, which are not yet concluded. In the near future I shall enter more largely into the consideration of the matter in all its details. I will only add now that I have used with excellent results in cases in which it seemed to be indicated, the *extract of the testicles of the bull* and also that of the *pancreas of the ox*, and these investigations also will be given to the profession at an early day. The first named of these—"testine"—I have found to be of the greatest efficacy in the treatment of sexual impotence, when it has been the result of venereal excesses, and in cases of too frequent nocturnal seminal emissions.

It has recently been alleged by some medical authorities that there is no difference in the physiological or therapeutical actions of medicines, whether they be introduced directly into the blood by hypodermic injections, or taken into the stomach, but it is scarcely worth while to seriously combat this assertion. For while it may be true that some substances are not altered by the gastric juice before they are absorbed into the system, it certainly is not true of many others, and it surely is erroneous as regards those of animal origin. Indeed, it is, I think, doubtful if anything capable of being acted upon by the gastric juice, and of being absorbed into the blood, gets into the system in exactly the same form in which it got into the stomach. And I am very sure that all organic matters, without exception, undergo radical changes under the action of the gastric juice, in some cases amounting to decomposition and recombination.

It is well known that *woorara*, the virulent arrow poison used by the Indians of South America, and which is invariably fatal to animal life when injected into the blood, is innocuous when taken into the stomach, even in very large quantity. I have ascertained, by actual experiment, that the *poison of the rattlesnake* may be swallowed with impunity. During the course of my medical service in the army on the Western plains, I have collected a large quantity of rattlesnake poison. A small fraction of a grain of this injected hypodermically was sufficient to kill a dog in a few minutes, while previously the same animal had been made to swallow a half a drachm without the production of any apparent result. Experiments made with the *saliva of hydrophobic animals* prove that it is rendered harmless by the action of the gastric juice. The *vaccine virus* may certainly be swallowed with impunity, as has been shown by repeated experiments upon animals.

Relative to the animal extracts to which I am now referring, I have ascertained beyond question that if they are inclosed in capsules so as to reach the stomach without coming in contact with the mucous membrane of the mouth,

they are absolutely without physiological or therapeutical effect, so far as can be perceived, even when given in quantities of a teaspoonful or more, but if dropped upon the tongue in double the quantity used for hypodermic injection, and allowed to remain in the mouth without being swallowed—thus avoiding the action of the gastric juice—they are absorbed, and exert a slower but still decided effect, though nothing comparable to that produced when they are administered hypodermically.

Now, gentlemen, a few words in regard to the theory upon which these animal extracts exert these remarkable effects. I have thought a good deal upon the matter, and I think I have arrived at something like the truth. But after all a theory, even when supported by indisputable facts, is not a matter of so much importance as the facts themselves. And it is better, if you are sure of your facts, to have an erroneous theory than none at all. The one I am going to propose is, I think, in accordance with physiological law, and I believe that it will strike your minds as being based on common sense, and as being sufficient to account for the observed phenomena. Briefly stated, it is as follows:

Organic beings possess the power of assimilating from the nutritious matters they absorb, the peculiar pabulum which each organ of the body demands for its development and sustenance. The brain, for instance, selects that part which it requires; the heart, the material necessary for its growth and preservation, and so on with the liver, the lungs, the muscles, and the various other organs of the body. No mistake is ever committed; the brain never takes liver nutriment, nor the liver brain nutriment, but each selects that which it requires. There are, however, diseased conditions of the various organs in which this power is lost or impaired, and, as a consequence, disturbance of function, or even death itself, is the result.

Now, if we can obtain the peculiar matter that an organ of the body requires, and inject it directly into the blood, we do away with the performance of many vital processes

which are accomplished only by the expenditure of a large amount of vital force.

Let us suppose a person suffering from an exhausted brain, the result of excessive brain-work. Three hearty meals are eaten every day; but no matter how judiciously the food may be arranged, the condition continues. Now, if we inject into that person's blood a concentrated extract of the brain of a healthy animal, we supply at once the pabulum which the organ requires. Then, if under this treatment, the morbid symptoms disappear, we are justified in concluding that we have successfully aided nature in doing that which unassisted she could not accomplish.

All this is applicable, not only to the brain, but certainly to the heart, the generative system, the spinal cord, and I believe other organs of the body. I have repeatedly seen a feeble heart rendered strong, the blood corpuscles increased in number, and the color of the blood deepened by the use of cardine, and I have many times seen an exhausted sexual system restored to its normal power by the use of testine, cerebrine, and medulline.

Such is the system, and yet I am not quite sure that it is entirely new. I recollect reading nearly forty years ago an account of some observations made by, I think, a German physician, relative to the treatment of diseases of the several organs of the body by a system of diet, consisting of the corresponding organs of healthy animals. Thus, liver disease was treated by beef's liver; heart disease by beef's heart; brain disease by beef's brain, and so on. My memory seems to be clear on the main point, but I have searched in vain for the paper to which I refer. The fact, however, that the various foods in question were cooked, and were taken into the stomach, constitutes a great difference with the system which I am now discussing, both physiologically and therapeutically, and the results do not admit of comparison. The germ of the idea, however, is the same, and I cheerfully yield to my unknown proto-observer, whatever distinction may be claimed on the score of priority.

And while I have been conducting my observations

others have been at work in the same direction, but their investigation do not seem to have led to any very definite results, or to have been systematically carried out. Generally they have been performed with the fresh juice of the organs, and, although at first sight this method would appear to be preferable to any other, experience shows that it is, as I have said, not unattended with danger, and I have certainly ascertained that extracts made with glycerine and pressure, extemporaneously, are absolutely without effect, either physiologically or therapeutically.

And now, gentlemen, I commend this whole subject to your serious attention. I shall leave a quantity of cerebrine with Dr. Leszinsky for distribution among you. I only ask that you will communicate to me the results of your observations.

ART. II.—Quarantine of the Future—A Uniform System under Central Authority.

By WILLIAM A. THOM, Jr., M. D., of Norfolk, Va.,

QUARANTINE MEDICAL OFFICER DISTRICT OF ELIZABETH RIVER; CHAIRMAN NATIONAL QUARANTINE COMMITTEE NORFOLK MEDICAL SOCIETY; SPANISH-SPEAKING SECRETARY SECTION OF PHYSIOLOGY PAN-AMERICAN CONGRESS.

So much has been written and thought of late on the subject of quarantine of the present that it has seemed to me that, after the manner of physicians, we might turn our autopsy to some account as a teacher for the future. Dr. Jenkins' article, in the November number of the *North American Review*, failed to give us important information, in that he tells us only what he did with ships actually having cholera on board. Such ships are not dangerous, for the reason that any grown man, be he physician or layman, would forbid her communication with the shore. What the country wishes to know is what was done with ships which might escape the observation of any but a practiced quarantine expert

At a distance, it seems that Dr. Jenkins failed in many

important particulars. First, he had weeks of time for preparation, for he must have known that cholera was certain to appear at his station, and the only preparation made seems to have been the artistic arrangement of two signal service maps in his boat-house, and the daily marking thereon of the daily advance of the disease. Was this his fault, or that of New York city? The daily papers continually extolled the state of preparation of the New York authorities to meet the threatened invasion at the outer threshold; and yet, when it came, after weeks of waiting and suffering on the part of the unhappy victims of circumstances, it took the personal check of Governor Flower to bring order out of chaos, reduce privation to comfort, and a regiment of the National Guard, to render available his noble generosity. Where the responsibility for this lies is a question which can only be determined on the spot.

Another point in which a mistake seems to have been made was in the too free communication with the shore; otherwise, how was it that the disease actually reached the city and gave the Board of Health the opportunity to display its splendid state of preparation, its magnificent resources, and its superb ability? Mr. Godkin and Senator McPherson complain of their cruel restraint, that they could not communicate with their friends, that their writing to newspapers was prohibited, etc. Did these gentlemen expect quarantine detention to be agreeable? Did they fail to realize that a quarantine without inconvenience, and even hardship, is an unattainable desire of all quarantine officers? In his sturdy refusal to listen to these complaints, and unwavering constancy under adverse criticism, Dr. Jenkins gives promise of being what he was not in 1892—a capital quarantine officer.

Another point in which I conceive the Doctor erred deeply was in his way of treating the famous twenty-day circular directed against emigrant ships. When the President signed that circular, he relieved every quarantine officer of a difficult and dangerous factor in the problem of

effectual protection of the country. When I saw the stand taken by Dr. Jenkins, I was amazed and alarmed. That New York, the very key of the position, should fail to avail itself of such help, was enough, I thought, to make the whole country doubtful and watchful of that port.

Leaving these points, in which Dr. Jenkins seems to me to have erred, I think he may be well proud of his record, and that he will do much better work in the future. But the state of affairs which existed in New York then is a tremendous object lesson upon the necessity for a uniform system of quarantine, dictated by some central authority not in close sympathy with the commercial interest of any particular port. Other ports may build an impassable sanitary wall around their water-fronts, only to be the more insidiously attacked by rail from some other less well-guarded point. In 1873, the infection passed through New York without injury to make an epidemic centre in Yankton, Dakota; another at Carthage, Ohio, and a third at Crow River, Minnesota—facts which show first, that the interior has rights and dangers which we, of the seaboard, are bound to recognize and guard against; second, that the interior has as much interest in quarantine as we have, and should have as much voice in the control of quarantine officers. No one port, not even New York, could afford to say we will receive no more immigrants for a certain length of time if another port (say Boston) opened its doors to them—that would be to transfer New York's commerce to Boston, and not afford New York due protection. Hence, it becomes the right and duty of the National Government to say to all ports alike, when necessary, no immigrants, no rags shall pass through your doors to the detriment of the general health, and to enforce that ruling on all alike. If the Marine Hospital Service has a right to put outside quarantines at the mouth of the Chesapeake, it has an equal right to do the same at New York and Boston, and the right should be as fully exercised. If a dangerous class of rags is admitted at Boston, it throws extra work of an annoying and peculiarly trying character upon all other cities of the country.

There should be some central authority vested with the power to say what and who shall enter these United States, and such decision shall be final.

The matter of the selection of suitable agents to carry out the behests of the central power is one fraught with delicacy and difficulty. They should be men whose knowledge of sanitary science would command respect in the communities in which they may be stationed; with will power enough to resist all attacks from commercial sources, whose interest they would at times be compelled to ignore; of an honesty which would insure the rejection of any bribe which it is certain they would be offered; of a courage which would enable them to walk calmly amid infection, disease, and death; with a knowledge of ships and men sufficient to enable them to seek out points of danger in one, and to determine falsehood from truth in the other; and finally, of humanity and gentleness enough to make them the protectors and comforters of those whom it may be their duty to subject to the annoyances of a quarantine detention. These agents I would keep at one port during their entire time of service, for there are certain points about each port which require to be considered apart from any general law.

These points settled, there should be certain stations established by the general government at commercial points on the coast within a day or two of each other, where ships, persons, and cargoes could be disinfected, the sick treated, and the dead buried. To these stations the local officers should send suspected ships.

Of course this would require a large outlay in first cost—hospitals for the sick, houses for the well, warehouses for cargoes, steam-disinfecting chambers, boilers for such goods as need boiling, generators for sulphur fumes, and a sufficient staff to attend to all the thousand duties—but the effectual protection of sixty millions of people from imported disease is more than worth the cost.

By such means persons would only be detained a little longer than the period of incubation of the suspected disease, counting the length of the voyage as part of the deten-

tion; ships and cargoes would be held only so long as to render them certainly safe, and then allowed to re-enter commerce. Each port would know what was being done at every other, and the painful uncertainty as to the meaning of a certificate of disinfection, which now exists, would be avoided. Each ship entering a port should be charged an inspection fee sufficient in the aggregate to support the service, and all costs of disinfection should be paid by the vessel needing it.

To recapitulate the outlines of the general plan urged above: A commission of five on quarantine, residing in Washington, to be appointed for life, in order to free them from all political influence; their quarantine decisions to be absolutely final; their salaries to be large, so as to make the places such as to excite the ambition of the best sanitarians of the world; a corps of inspectors, whose salaries would be regulated by the importance of the port where each is stationed; sundry disinfecting and observation plants for the proper handling of infected people, cargoes, and ships, and a general system of reports from our consuls abroad, showing the sanitary condition of the territory of each.

ART. III.—Practical Observations on Treatment of Typhoid Fever.

By R. L. PAYNE, A. M., M. D., of Lexington, N. C.,

EX-PRESIDENT MEDICAL SOCIETY OF STATE OF NORTH CAROLINA, ETC.

During a practice of many years, and a large experience in the treatment of typhoid fever, I have formed some opinions relative to the disease at variance with those generally held by the profession, and I deem it not out of place to put them on record in the following paper, that my brethren may accept or reject them, according as their combined and better judgment may determine. These opinions are heterodox, but are drawn solely from my own experience, and,

like most old physicians, I shall probably hold to them, whether any one agrees with me or not.

Tanner says: "Hæmorrhage is among the most unfavorable symptoms" which can occur in this disease; and doubtless all will agree with him in believing that it is not only one of the most unfavorable, but is also one of the most surely fatal complications which can possibly arise if it be not speedily arrested. This applies to all hæmorrhages of any consequence, but more especially to hæmorrhage from the bowels; yet, from my experience, I am of the opinion that if such hæmorrhages are arrested before too great prostration follows, the symptoms in the case are all ameliorated, and the patient goes on to a more speedy recovery. I have seen a great many cases of hæmorrhage from the bowels, in a large number of which great quantities of blood were lost; but I have never had but two fatal cases, and in both of these I was not notified of the condition until after the patients were dead.

After giving the statistics from Murchison, Louis, Leibermeister, Griesinger, Turpin and others, Hutchinson, in Pepper's "*System of Medicine*," says: "Of Leibermeister's 127 cases, 49, and of Griesinger's 32 cases, 10 terminated fatally; 3 of my own cases ended in death * * * * *. In the face of facts such as these, there have not been wanting authors to assert that the effect of the hæmorrhage was sometimes beneficial. Chief among these are the celebrated Irish physician, Graves, and his devoted admirer, Trousseau."

Now, from my own experience as given above, I am compelled to agree with Graves and Trousseau, rather than with the others quoted, in spite of their statistics; and I have seen many a case in which the effect of the hæmorrhage seemed to be beneficial when it was arrested before dangerous collapse came on.

Flint says: "A rare, but somewhat characteristic complication is inflammation of one or both of the parotid glands. It leads to a notable enlargement, and the appearance is

like ordinary mumps. But unlike the affection just named, in the great majority of cases suppuration takes place * * *. This complication adds to the danger, and retards convalescence."

On the same subject, Hutchinson says: "Swelling of the parotid gland occurs in typhoid fever * * * *. It is most frequently met with in bad cases * * * *, and may terminate in resolution or suppuration. I have seen it three times only * * * *. One of my cases was fatal; the other ended in recovery, as did the third case, I believe. Murchison saw it in only six cases, five of which were fatal. According to Hoffman, sixteen cases were found at Balse * * *, seven of the sixteen ending fatally. Trousseau looks upon these swellings as a very grave accident, and says that he has scarcely seen a case recover * * * *. Chomel, on the other hand, is said to have regarded them as critical and auspicious."

When I was quite a young man, and had just begun the practice of medicine, I heard an old physician say that a typhoid fever patient of his would certainly die because he had an abscess under each ear, and that he never knew such a case to recover. In about two weeks afterwards, one of my own patients developed such a condition, and I need scarcely say how much frightened I was, and especially when I learned that the old doctor's case did die. My patient had severe inflammation of both parotid glands which resulted in suppuration, and it became necessary to feed him for three weeks through the cracks between his teeth, and to support him by means of nutrient and stimulating enemata. He had also a large abscess in the calf of the right leg; but, in spite of it all, he recovered. Since these, I have treated many another similar case, and never had one to die; and, as a consequence, whenever I have a typhoid patient with parotiditis, whether it results in suppuration or not, or in an abscess, or a boil anywhere on the external surface of his head, body, or limbs, I hail it as a

favorable omen, and agree with Chomel in regarding it as "critical and auspicious."

Again, I do not believe there is any certain and invariable characteristic *temperature* in typhoid fever. Hartshorne says: "An attack of disease in which, on the second day, the heat in the axilla is as high as 104° , is not typhoid fever; and the same exclusion applies if, from the fourth to the eleventh day, the temperature falls below 103° ." Now, I am sure I have seen cases of genuine typhoid fever in which the initial temperature was higher on the second day than at any subsequent period of the attack (as high as 104° or 105° or more), and I have treated well-marked cases too, which were dangerous, and sometimes fatal, in which the temperature, at no time during the attack, exceeded 102° .

The truth is, I know of no disease in which the temperature is so variable in different cases. These things being so, I am convinced that the temperature alone by no means marks the full gravity of a case, nor is it, taken by itself, a pathognomonic symptom.

It is, no doubt, true that destructive metamorphosis goes on more rapidly, and heart-exhaustion is more imminent, in cases of prolonged high temperature; yet it remains true also, that typhoid fever sometimes proves fatal from hæmorrhage, perforation, and other causes, in cases in which the temperature is never high.

While on the temperature, allow me to say that I do not like quinine as an antipyretic in this disease; and as a tonic it has not answered as well in my hands as the infusion of serpentaria, because, given in either way, it almost invariably adds to the patient's discomfort, and seems sometimes to hasten the onset of nervous symptoms, if it does not really cause them.

Antipyrin, antifebrin, and some others of the coal tar derivatives, have, in some instances, answered well in my practice, but they are uncertain in their effects; and sometimes, when least expected, the prostration which follows their use more than counterbalances the benefits.

So my experience leads me to believe that there is no an-

tipyretic so safe, so sure, and so reliable, as *cold water*. The cold bath, or cold pack, may be used with advantage, but frequent sponging all over the surface of the body with cold, acidulated water, has been of great service to me, and is a perfectly safe procedure, which very generally adds greatly to the patient's comfort.

Cold water or bladders or bags of ice applied to the whole head, but more especially to the occiput and nape of the neck, is a most potent antipyretic measure. So, also, cold water poured gently over the head, for a half hour or more at a time, will very materially lower a high temperature, and is about as good an antipyretic as I have ever seen used.

A diet of milk alone has not answered as well with my cases as a diet of milk alternated with good animal soups, or broths, and sometimes with eggs in the form of egg-nog.

The practice of constantly prescribing new remedies, and dispensing with those that have been well tried, is a most pernicious fashion, and has, no doubt, led to many an untimely death.

In fact, in this disease, perhaps more than in any other, the "*nimia diligentia medendi*," either with old or new remedies, has aided and abetted the work of the destroying angel; and observation teaches me that he is the most successful practitioner who feeds well, stimulates judiciously, has his patients well cared for and faithfully nursed, and treats symptoms promptly, as they arise—that is, by the so-called expectant plan.

And finally, I am fully persuaded that it requires as much good judgment to know when to withhold medicine in typhoid fever as it does to know when to administer it.

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a domestic agent to many other similar goods. (See page 28, this issue.)

ART. IV.—Practical Data of the Application of Water in Some Intractable Diseases.*

By SIMON BARUCH, M. D., New York, N. Y.

The recent revival of hydrotherapy is an interesting phase of therapeutics in this country. Three years ago the first paper, giving a general review of the uses of water, external and internal, by lavage, irrigation, baths, etc., was read before this Society. Articles on this subject have now become numerous. A new journal has appeared on balneology, and a department in that magnificent specimen of American journalism, the *Annual of the Universal Medical Sciences*, chronicles the advances in this therapeutic specialty. Indeed, a recent letter from Dr. Winternitz, Professor of Hydrotherapy in the University of Vienna, refers to the fact that more is now done in this country for hydrotherapy than in Germany, its birthplace.

The chief, though not the only aim of hydrotherapy, is to stimulate or give tone to the nerve centers. Since all vital energy emanates from the latter; since the proper performance of all the organic functions depends upon their activity, it is fair to deduce important therapeutic results from this agency, which influences it so potently. The main question is, does the application of water to the cutaneous surface stimulate the nerve centers? That this is a trite physiological fact, is daily observed in the effect of a dash of cold water in reviving a case of syncope. Here we have a brief shock to the sensory peripheral nerves followed by reaction, whose effect is transmitted to the central nervous system, and thence to the respiration, deepening it and the circulation, restoring the failing pulse; thus the temporarily dormant vital powers receive a stimulus whose appreciation must convince the most sceptical by its very simplicity.

At this time I do not propose to dwell upon the various modifications which changes in the temperature of the water applied to the cutaneous surfaces may produce, nor the re-

*Read before the Medical Society of the County of New York, January 23, 1893.

markable difference of effect resulting from the increase of the pressure under which it strikes the skin, nor the valuable results of changes in the duration of the procedure.* Suffice it to say, that we have in the external use of water a therapeutic agent so flexible that it may be adapted to the most varying types and forms of disease. The following brief outlines of cases are presented in order to enable you to obtain a view of the practical application of hydrotherapy in some intractable, chronic diseases, to demonstrate its flexibility, and to point out the methods of adapting it to varying conditions:

CASE I.—*Intense Chlorosis*.—Miss H —æt 20, ill two years; under constant treatment by gynecologists in Harrisburg, Baltimore and Philadelphia, was brought, as a last resort, to Dr. T. G. Thomas to be placed in his sanatorium. Dr. Thomas discovered no uterine trouble, and referred her, on June 8th, 1892, for hydriatic treatment, with a diagnosis of chlorosis of aggravated type. Local medical and institution treatment, iron, arsenic, diet, and massage and change of air had been tried in vain. Although the patient was plump, a more pallid creature could not be imagined. Appetite was poor, bowels irregular, her sleep was disturbed, and she was subject to frequent (hysterical) fainting spells. The slightest exertion produced difficult breathing and rapid heart action. Menstrual flow was regular, but scant and very pale. Blood, examined by Fleischl's hæmometer, registered 31 per cent.

June 10th.—Preparatory treatment by hot air baths and douches, to educate the patient's reactive capacity, was ordered. Fainting in the hot air bath, she was removed; a spray douche of two seconds, at 64° with 20 pounds pressure, was rapidly passed over her, in a sitting posture. She again fainted. Friction produced no reaction.

On the following day a milder course was pursued. She was gently wrapped in a long-haired woolen blanket for 45 minutes. Parts of the body were successively uncovered and splashed with water at 60°, thrown with some force from the hollow hand of the attendant. This was followed by friction, and continued until the whole body had received the ablution and friction. The same treatment was continued on the 11th and 12th, when she fainted twice. This was

* See "The Uses of Water in Modern Medicine," by Simon Baruch, M. D. Detroit: Geo S. Davis.

repeated without fainting until June 16th. She was again placed in a hot bath (167°) with a cold compress around the head and given frequent sips of ice water. The head not being subjected to the heat, the patient was enabled to breathe the cool air which permeated the room. When the cutaneous vessels became turgid, she was seated in a tub containing 16 inches of water at 100°, thoroughly rubbed for three minutes. This was followed by an ablution at 60°, good friction drying and general massage for fifteen minutes. She fainted twice during these procedures.

July 8th.—The last treatment had been continued, reducing temperature of the douche daily one degree. To-day she had an air bath (160°F.) followed by spray douche under 30 lbs. pressure for five seconds, beginning at 80° and rapidly reduced to 50°, followed by 15 minutes general massage. She reacted well and felt comfortable.

July 14th.—Same treatment has been continued. To-day she had a hot air bath (175°) followed by rain bath 30 seconds, at 94° reduced to 69°, then spray douche 10 seconds 79° to 54°, and general massage. Reaction good.

July 30th.—This treatment had been continued until to-day she took a jet douche at 45° without flinching. Being absent in Long Branch, I wired Dr. S. T. Armstrong to examine her for me. Dr. A. reports: Miss H. looks quite well, eats and sleeps well, and is certainly improved since I last saw her. The comparison test indicates about 100 per cent. hæmoglobin.

August 1st.—Miss H. left for her home, in Pennsylvania. This case certainly illustrates:

1st. The effect of the douche in improving the nutrition.

2d. That hæmatosis may be enhanced by the stimulus conveyed from the periphery to the nerve centers, and thus reflected upon the bloodmaking functions, (as have been well shown by Winternitz, Thermes, and others).

3d. That the most feebly reacting patient may, by perseverance and proper adaptation of the hydriatic procedure, become accustomed to this treatment. The danger of shock from cold water is proven to be chimerical by this case.

If this fragile and sensitive young woman could be accustomed to the douche by beginning with mild procedures, no chronic case that is not *in extremis* could fail to respond to it.

CASE II.—*Nervous Dyspepsia—Anæmia*.—Mrs. O. æt 28, resident of Florida, consulted me May 5th, 1892, for "catarrh of the stomach," because of agonizing pains after meals. She has been living on mush and milk, and has had medical treatment for several years, with diminution but not disappearance of the pains. She is emaciated; her voice is feeble; she is depressed and hopeless. Her wan face and prematurely old appearance bear evidence of a life of constant physical suffering. There is not a particle of the hysteric element in this case. Ordered at 12:30 P. M. a full test meal at Delmonico's, which she reluctantly accepted, because of dreaded increase of pain. Returning to my office at 5:30, the stomach was washed out without difficulty. To her surprise my prediction that her dinner would be digested was verified, a little tomato peeling being the only remnant visible.

The diagnosis of a gastric neurosis being thus confirmed, she was ordered a mixed diet, chiefly consisting of hot milk and stale bread and hominy for breakfast, adding eggs (soft boiled later), same with fish or oysters for luncheon, and steamed rice and roast beef for dinner. Desert and salads forbidden. The general invigoration of the entire system being the chief therapeutic element in this case, she was at once placed upon daily hydiatic measures, as follows:

May 6th.—Hot air baths at 169° for six minutes filled the cutaneous vessels of her pallid skin and produced free perspiration. This was followed by a tub bath of water at 98° , for five minutes, and a rain bath of 95° , reduced to 90° , for half minute, at 20 lbs. pressure, for the purpose of increasing cutaneous action. A tonic procedure by the spray douche at 90° for five seconds, with friction, closed the first treatment, and resulted in good reaction.

On the following day she remained in a hot air bath at 164° only long enough to render the cutaneous vessels turgid to promote reaction from the rain bath for 30 seconds, at 90° reduced to 80° , and a spray douche at 70° . Reaction very fair.

May 11th.—Temperature of rain bath was reduced to 75° , and a jet douche at 65° was added. Reaction good.

May 23d.—Same treatment with jet douche to back at 60° .

May 25th.—Complained of sciatic pains on right side. The Scotch douche was applied to the gluteal region for 30 seconds, followed by jet douche of one second at 59° .

May 31st.—On account of menstruation, treatment has been omitted for six days. Sciatic pains relieved. Treatment of May 11th resumed.

June 12th.—Temperature of rain bath reduced to 70°. Patient has been steadily improving in flesh and spirits, being free from pain until to-day. The addition of cauliflower to her diet reproduced pains. Stomach was washed out and some mucus found in it. Temperature of jet douche was raised to 60°, as patient was excited by it.

June 19th.—Jet douche suspended; hot air bath 180°, followed for 40 seconds by rain bath of 75° reduced to 65°. Stomach was washed out again.

June 20th.—Pain returning, the constant current 12 milliamperes was applied by a large flat sponge electrode over epigastric, and a small one over lumbar region.

June 27th.—Temperature of baths having been higher, were now reduced, patient being again depressed. The jet douche was given at 50° for three seconds. Reaction good.

July 9th.—Electricity having been unavailing and there being fermenting material found in the stomach, the Scotch douche has been applied to the epigastric region for 30 seconds after the rain bath 70° to 45° daily, and followed by jet douche at 50° for three seconds. Patient now feels sufficiently restored to go to Buffalo to her parents.

Under date of November 26th, 1892, she writes that she has gained fifteen pounds in weight and is much stronger, and has continued the diet prescribed, because, like most of these neurotics, she feared her stomach was not equal to much of a change. Most of the time she is entirely free from pain; she has slight distress every now and then, but expresses the warmest gratitude for the help given.

This case is similar in many respects to the case of Dr. H., reported in "The Uses of Water," page 85, vol. 1, and demonstrated the value of hydrotherapy in improving the nutrition and thus furnishing better blood to the stomach nerves, which are calling for it through pain.

CASE III.—Diabetes and Obesity—Failure of Diet—Success of Hydrotherapy.—On March 7th, 1892, I was consulted by Mrs. S., wife of a prominent police official, æt. 63. She had been suffering from lassitude, loss of appetite, depression of spirits for several months; had been relieved of muscular rheumatism by wet packs and massage a year ago.

Examination of urine revealed 6 per cent. sugar by fermentation test. Sp. gr. 1040—quantity for 24 hours, 81 ounces. She was languid and indisposed to exercise, weighing, without clothing, 253½ lbs. on the 21st of March. An anti-diabetic diet was ordered and systematic walking exercise. The

former was rigidly adhered to for four weeks without effect; the latter could not be accomplished, because walking two blocks "put her out of breath," and exhausted her. Acting upon the well known physiological fact, that next to the liver the skeletal muscles hold most glucose, and that sugar is, by exercise of these muscles, best utilized for the benefit of the organism, I regard systematic exercise of quite as much importance as diet. I have the record of six cases in which these two, combined entirely and permanently, removed the sugar from the urine. A strict diet having failed in this case, it was important that some therapeutic method be adopted to enhance the patient's capacity for muscular exercise. It was determined to reduce her weight and invigorate the nervous system by a carefully regulated hot air bath until free perspiration ensued, once a week, followed by the spray douche at 90° for half minute, and at 80° for ten seconds. This succeeded by active massage. Five times a week, she received a tonic hydiatic procedure, beginning on the 28th of March with the dry pack for half hour, to fill the cutaneous vessels, followed by a general ablution at 70° and good friction. Patient attended daily, coming from her home in West, 152d street in a carriage, as she was unable to walk.

By April 15th she had lost 61 lbs. and felt able to walk six blocks twice a day.

April 22d.—Urine showed sp. gr. 1035; sugar, 5½ per cent. Wet packs 45 minutes, sheet wrung out of water at 50°, followed by hot air bath 10 minutes at 85°; sponge ablution on back at 70° with active friction in tub; massage 15 minutes. The object of this treatment was to increase tissue change and improve the circulation in the muscular tissues. This was continued until June 6th, the jet douche at 75° being added as a tonic and for contracting the muscles. The result of these procedures was ability to walk more every day until she was not fatigued by four miles per diem. The diet being rigidly adhered to, a rapid decrease of sugar was evident every week from the date of the first half mile walks.

Since July 1st she has been entirely free from sugar until the present time—frequent analysis having been made until December 1st, 1892.

In this case the diet alone pursued for five weeks made no impression, but as soon as the patient was able to oxidize her sugar by means of muscular exercise, improvement became pronounced. No medicinal agent could have accom-

plished this change in the nervous, muscular and vascular structures in so brief a time, if at all. Of this I am convinced by other cases similarly treated.

CASE IV.—*Diabetes Not Influenced by Diet and Hydrotherapy.*—Mrs. Dr. B., æt. 65, applied for treatment for a severe herpes zoster on the left part of the back below the scapula. On the evening of April 4th, 1890, I was hastily summoned, after I had treated her herpes on the preceding afternoon. She was absolutely comatose, without any reflexes, etc. Drawing some urine by catheter, I found no albumen, but decided evidence of sugar, this being its first discovery. Towards morning she became conscious spontaneously, and began to improve. On the following evening she was seen in consultation by Dr. A. L. Loomis. She continued under the treatment, chiefly dietetic and codeia and constant current for severe neuralgic pains at former seat of herpes. Sugar has been almost constantly present in small quantities, one-half to one per cent. During the winter of 1892-93 she decided to undertake a thorough course of hydrotherapy, encouraged by the patient whose history is given above and who lives near her. The same treatment had not the slightest effect on the urinary sugar. But she regarded herself to be so much invigorated and capacitated for work and exercise, that she voluntarily takes the treatment twice a week as a tonic agent.

CASE V.—*Sexual Hypochondriasis—Failure of Hydrotherapy.* M—æt, 47, was referred on June 5th, 1892, to the Institute by Dr. S. Weir Mitchell, of Philadelphia, with the following history, (here abbreviated): Patient complains of impotence and a sensation of water trickling down front of thighs. Habits good; had three children, all dead; two died at birth. Three years ago, when his wife was absent, he first discovered the trickling sensation. On her return he found sexual desire present, but was incapable. Emission occurred, and still occurs, in sleep. Had two strictures cut without relief. After being in the mountains a year ago, he had two successful connections, and again in November, 1891; more frequent emissions and firmer erections during sleep. These are rare now. Present state—stout man; abdomen pendulus; uro-genitals normal; cremaster reflex absent; paræsthesia along anterior crural nerve; electrical examination negative; sleeps well; appetite good; no sperm in urine.

Dr. De Schweinitz pronounced eyes normal. Dr. Mitchell

regarded patient as suffering from some slight but distinct trouble of the lumbar or dorso-lumbar cord; dread of sexual failure is probably emotional; full recovery of power is probably not to be looked for. Advises electricity (detailed), also douches, alternating warm and cold, to spinal column.

Treatment at Institute June 5th.—The patient's peripheral circulation being feeble, skin flabby and inelastic, pulse compressible, and a general aspect of mental and physical depression being present, it was thought advisable to give him tonic treatment as follows: A hot air bath (170°) for twelve minutes; having warmed him up, a rain bath of 100° reduced to 80° during 45 seconds was given under 30 lbs. pressure, and followed by the jet douche at 70° for two seconds under 15 lbs. pressure. General massage was given for fifteen minutes. Reaction was poor.

June 6th.—Hot air bath (178°) 10 minutes; rain bath 95° reduced to 70° during one minute, was followed by Scotch douche (alternating hot and cold stream) to spine. Reaction poor.

June 11th.—Same treatment was continued, reducing temperature of douche daily one or two degrees and increasing pressure. Reaction is now good, and patient looks brighter. The perineal douche (jet) of 60° for one minute is now added for psychic effect.

June 12th.—Patient, dissatisfied, does not think he can improve by having a little cold water sprinkled on him, and insists upon more active measures.

June 16th.—The psychrophore of Winternitz (a small rubber or skin bladder secured to a double current straight rectal tube attached to an irrigator) is applied for five minutes, with water flowing at 45° .

June 19th.—Patient looks better, but insists that, without having any test, his sexual power has not improved. He leaves for Chicago to-morrow, and tells me that without my knowledge he had been under local treatment by Dr. E. L. Keyes while he was under my care.

Two other cases of *Sexual Hypochondriasis* of a milder form and in younger men were successfully overcome by the treatment here outlined.

CASE VI.—*Sexual Neurasthenia—Recovery under Hydrotherapy.*—In a man *æt.* 25, the tonic treatment by hot air baths, followed by rain baths and jet douche to spine, gradually lowered to 45° , was positively efficient in establishing a satisfactory condition. This gentleman applied for treat-

ment for general debility. He was not a sexual hypochondriac, because he incidentally mentioned that he had been married six weeks and did not experience the feelings that he had anticipated from sexual congress, to which he had been an entire stranger before marriage.

After two month's treatment he volunteered the statement that he was entirely satisfied with the results.

CASE VII.—*Angina Pectoris*.—Mr. D., æt. 40, of robust appearance, gives a history, on the 24th of September, 1892, of having suffered for several months from agonizing pain in the præcudial region whenever he attempted to exercise much. He was disabled from business and much depressed; all functions normal. Dr. Kenne, his attendant, called Dr. Janeway as consultant; diagnosis *angina pectoris*. Another consultant suggested aneurism of aorta, advising rest and the usual treatment. Mr. D. presenting a decidedly gouty diathesis, urine loaded with uric acid, etc., he was put upon a non-meat diet, and a daily wet pack for one hour, and a continuous wet compress around left side of chest. After three month's treatment, during which pain diminished in frequency and intensity, he was allowed to take a trip to Chicago. On his return he was placed upon a diet of chopped beef, preceded by hot water, for breakfast and dinner; and oysters and hot milk for lunch. Compresses have been discontinued. Wet packs daily, sheet wrung out of water at 80°, and followed by an effusion with water at 70°. He always sleeps soundly during the packs. *January 21st*, reports himself entirely free from pain, although he has done more work than ever in his life and passed through the excitement of seeing his factory burned down and reconstructing it.

The soothing effect of the wet pack and its effect in promoting tissue change are well exemplified in this case.

CASE VIII.—*Incipient Phthisis Pulmonalis*.—Mr. S., from Kentucky, æt. 26, merchant, consulted me at Long Branch *July 29th*, 1892. Looks pale, emaciated; he has been losing flesh, and coughing seven months; is constipated; has no appetite. Caught cold during a fire; no hereditary element. Temperature, 101°; pulse, 120°. Percussion dull over left supraclavicular space; respiratory murmur in left apex harsh; expiration prolonged. Ordered calomel, 6 grains, and absolute rest.

July 31st.—Feels better. Temperature, 99°. Ordered to go to the Hydriatric Institute for treatment. Here he was

weighed (nude) 106½ lbs., and received a hot air bath until warm, to enhance his reactive powers; this was followed by a rain bath of 95°, reduced gradually to 90° for 40 seconds under 10 lbs. pressure, gradually increased; then spray douche at 15 lbs. pressure, gradually increased to 30 lbs. for four seconds at 70°. This was repeated daily.

He reported again at Long Branch ten days later looking better, appetite improved, and with a gain of 1½ lbs. A friend advised him to have his sputum examined, which was found to contain bacilli. He was urged by his friend to see Dr. E. G. Janeway, who after prolonged examination pronounced him phthisical, and advised him to leave the city at once, and ordered creosote. As he was improving under hydrotherapy and disliked to leave, I regarded his departure with disfavor and advised continuance.

Sept. 8th.—The hot air bath, followed by rain bath 80° to 70°, and spray douche 70° to 40°, have been continued; until to-day patient weighs 114 lbs.—a gain of 7½ lbs. in five weeks; appetite excellent, cough still troublesome; is very hoarse; temperature, 101°. Benzin inhalation and ¼ grain codeia every four hours improved cough in two days, during which time hydiatic treatment had been discontinued. It was now resumed.

Sept. 12th.—Temperature is 90°; cough reduced to a minimum; appetite excellent; weight, 113½ lbs. Has been taking 6 drops creosote t. i. d., which sickens him, and is discontinued. Ordered Maltine with Peptones t. i. d. in milk.

Sept. 19th.—Hot air bath (170°) three minutes; rain bath 80° reduced to 64° one minute, from which he reacted well. Cough troublesome, a spirometer test shows 190° before and 200° after treatment, which is 20° above the average for his height.

Sept. 20th.—Dr. J. S. Ely reports tubercle bacilli in small numbers.

Dec. 30th.—With occasional interruptions and loss of weight, patient has progressed well, and to-day weighs 121½ lbs.; looks well; coughs but little; no temperature, and is anxious to go home. Dr. Freudenthal, who treats his throat, writes, January 12th, 1892, after detailing from his case records, the physical signs he found on *July 27th*, and again on *November 11th*, 1892: "Patient looks and feels much better, and has gained 10 lbs. in weight. Ulceration of the ligamentum glosso-epiglotticum and of the vocal cords, which have healed under lactic acid and menthol oil (20 per cent). Although I am not as optimistic as you are re-

garding water treatment, I must acknowledge that the improvement in this case is remarkable."

Jan. 11st, '93.—Patient is to-day almost free from cough; has good appetite and digestion; weighs 122½ lbs. (a gain of 16 lbs.), and five pounds in excess of his average weight in health. Dr. VonGiesn reports that no tubercle bacilli could be found after examination of seven slides.

There having been no change made in the patient's diet, mode of life and treatment, this case is a clear illustration of the utility of judicious hydrotherapy in improving nutrition in cases that usually thwart us. Clinical evidence of its value in phthisis is accumulating so rapidly, that I need only refer here to a few of the cases I reported to the State Medical Society last February. One of these, æt. 33, of 1½ years' duration, beginning with pulmonary hæmorrhage, gained 26 lbs. in three months, and coughed so little that no specimen of sputum could be furnished; another, 36 years old, ill 2½ years, beginning with hæmorrhages, gained 21 lbs. and lost all bacilli from sputum and returned to work; another, æt. 31, ill one year with repeated hæmorrhages, night sweats, etc., who was discharged after one year's treatment, with 20 lbs. gain of weight without bacilli and slight physical signs and able to go to work (*Trans. N. Y. State Med. Soc.*, 1892, pg. 382). Such stubborn facts should make us pause ere we condemn these sufferers to exile from home. A more methodical management, as indicated in the above quoted, offers a reasonable prospect of success for *home* treatment. Witness the case of H. M. (p. 384), who, after emigrating to Minnesota and improving there for six years, came to this city with a cavity and the most desperate general condition, and was sent home so much improved that he is able to attend to business.

Clinical proof abounds that phthisis offers, next to nervous diseases, the most fruitful field for hydrotherapy.

CASE IX.—*Advanced Bright's Disease, with Albuminuric Retinitis—Remarkable Results from the Hot Blanket Pack.*

Mr. A., æt. 60, a foreman at a lead trap factory, came under my care by request of his benevolent employer on May 4th, 1891. I had attended him several years ago for lead colic and severe headaches, from which he recovered. I

now found pronounced swelling of feet and ankles, breathlessness on exertion, morning nausea, headache, double vision, and vertigo; urine showed a large proportion of albumin, abundance of hyalin casts, sp. grav. 1020.

Patient received 10 grains of calomel, was put on bitartrate potas-lemonade, and was ordered one minim of 1 per cent. solution of glonoin every three hours until flushed. He also received hot blanket packs of one hour, morning and evening. The quantity of urine having been reduced to 22 ozs., this treatment continued active until May 28th. Dr. Edward S. Peck examined his vision to-day, and diagnosed homonymous diplopia, amblyopia, and albuminuric retinitis. Dr. Peck examined urine on the 29th, and found it to "contain albumin in large reduction." There being some improvement in the symptoms, the same medicinal and dietetic treatment was continued. The hot blanket packs were given once a day, by means of a blanket thoroughly wrung out of hot water, laid upon another blanket. Patient was snugly tucked into the hot blanket, and afterwards covered by other blankets. He remained in this one hour or more, until he perspired very freely. Successive parts of the body were now gradually uncovered and thoroughly dried. General friction closed the procedure.

June 30th. Examination of urine made from time to time revealed gradual improvement in quantity and constituents. He went to the country on the 1st of July, 1891.

On September 9th, he called at my office. His urine presented but a trace of albumin; he was free from all unpleasant symptoms, was strong, and had resumed his duties at the factory for the past week.

October 4th. I could find no trace of albumin nor casts in his urine. He worked without interruption during the entire winter, until August, 1892, when he was obliged to discontinue by a severe diarrhœa, for which I was not called. He went to Hackensack, N. J., and was there attacked, on the 16th day of August, by apoplexy and hemiplegia, from which he died after remaining unconscious six days.

Dr. St. John, his attendant, states that, prior to this illness, he had examined the urine, finding no casts and but a small percentage of albumin. There was no œdema.

This case illustrates the value of the hot pack in restoring the failing function of the kidneys. It cannot be disputed, that he was utterly disabled by pronounced uræmia and albuminuric retinitis, and that he recovered from these

so as to work steadily for a whole year. His work demanded precision and good sight, both of which he possessed during this period. Dr. Wm. McLaury, who attended other members of the family, saw him during and after the illness.

Cases like this should give us confidence in the value of hydrotherapy in milder cases of Bright's disease.

In the Montefiore Home, such cases are not infrequent. In the Report for 1891, Drs. Ettinger and Rosenthal say: "Two cases of chronic Bright's disease owe marked improvement to the systematic application of hydrotherapy." Both had been treated for several months elsewhere without benefit. Both suffered from extensive dropsy of abdomen and legs. Eight quarts of fluid were removed from one of these on the day of admission, and the other had been repeatedly tapped. The dropsy has progressively disappeared, until now it is entirely gone in both cases.

CASE X.—*Subacute Nephritis—Intense Catarrhal Jaundice.*—Mrs. S. consulted me on June 29th, 1892, being pregnant eight months. Albumin and granular casts in urine indicated nephritis of pregnancy. Two days later, she was attacked by convulsions, during which she was delivered, by forceps, of a child which had continued to thrive. She remained comatose twenty-four hours, the urine being reduced to 6 ozs. Calomel, hot blanket packs, and nitro-glycerin "unlocked" the kidneys. The urine remained albuminous and scant for several weeks. Her recovery has been slow, but steady, under a non-meat diet, digitalis, nitro-glycerin, etc. Urine was still albuminous, when I was compelled to leave her on the 5th of September. She was now kindly cared for by Dr. A. H. Smith, who sent her to me on the 26th of September, with the following (here abbreviated) history: "For some time after you left, Mrs. S. did very well. The urine was abundant, and the amount of albumin very small. I allowed her meat once a day; appetite improved, and kidneys remained satisfactory until her menstrual period, when there was an abrupt fall in the amount of the secretion to 30 ozs. or less, with increase of albumin to 5 or 6 per cent. I then put her back on digitalis and added potas. acetate. This failed to increase the urine, and the hands and feet became a little swollen. I then ordered nitro-glycerin, and in twenty-four hours the amount was doubled. The specific gravity kept about 1015 to 1020; diet mostly milk. About

a week ago, when the quantity of urine was smaller, she developed an intense itching of the surface without any eruption. Increase of urine was not followed by improvement in this respect. It appears to me to be a case well adapted for hydrotherapy, and I am glad she is under your observation for this reason especially. The itching is very distressing. Bicarbonate soda has little effect. Hyoscyamin gave her sleep. I sincerely hope you will be able to do something for her relief, etc."

Having returned to the city, on the 27th of September I found Mrs. S. in a most distressing condition from constant itching of the entire surface; her eyes and skin had a yellowish tinge; bowels constipated; stools clay colored; no appetite; urine 30 to 36 ozs. daily by careful measurement, and decidedly albuminous. All sorts of local applications failed except a warm bran bath, whose success was temporary. She was now ordered a daily wet pack for three-quarters of an hour, sheet wrung out of water at 70°; reduced daily two degrees, followed by rapid ablution with water at 60°; reduced daily one degree; also an enema of 1½ quarts of water every day at 80°; reduced daily five degrees until 60° was reached; Carlsbad salts twice a week; and a non-meat diet. She passed twelve ozs. of urine during the first four hours after the first pack. It continued to increase daily until the quantity reached far beyond the normal.

This treatment was continued until November 1st. The last albuminous urine (a trace) is reported for October 11th at which time a few granular casts were still present.

December 27th. Since that time eight specimens have been examined, all of which are entirely free from abnormal elements. Patient has gradually improved, with the exception of three days of intense colic, which I attributed to gallstones. These were carefully searched for, and found on November 26th, since which time the pain ceased—the skin cleared up entirely. For two weeks she had hot air baths, followed by the rain bath at 95° reduced to 80°, for twenty seconds, and the jet douche at 70°, for two seconds, with massage. This tonic procedure improved her appetite. She is now taking two ozs. olive oil twice a day in sarsaparilla syrup; and is allowed white meat three times a week, and beef once a week.

In this case, the action of the wet pack as a stimulant to cutaneous action, which relieves the kidneys of work, was

potent. Kussmaul, Friedrich Hoffman, and others, have pointed out the superiority of the cold pack over the hot in subacute cases of nephritis. Krull's injections have so frequently proven themselves the most efficient remedial agents in catarrhal jaundice that the value of this hydiatic procedure need not here be dwelt upon. Dr. Smith's prediction that this case required hydrotherapy proved correct.

January 15th. Patient has been discharged several weeks, with allowance of meat every other day. She is perfectly well. Urine examined to-day is found normal.

CASE XI.—*Hystero-Epilepsy*.—July 19, 1892. A. F., æt. 15, was brought to the Hydiatic Institute, by his father, who says on the 31st of March, 1892, on the day of his daughter's burial, the boy fainted. Ten days later he fainted in school, and again two days later. Dr. S. P. Cahen investigated the case at school, coming to the conclusion that it was "a form of epilepsy." The boy was kept from school and put on bromide potassium. The attacks becoming more frequent, Dr. Geo. W. Jacoby was called in consultation; the same treatment was continued. He continued to have attacks every day, and very often twice a day, lasting from five to ten minutes. At first he lay unconscious, without any movement whatever; then the attacks became violent, frequently requiring several men to hold him down and prevent him from doing himself bodily harm. Dr. Jacoby was again called in consultation, and made an unfavorable prognosis. Several neighboring physicians, who had been called during the attacks, gave him hypodermics of morphine. Patient also has received electrical treatment from Dr. Cahen. *Status presens*.—Face pale, covered with care, eyes restless, hand tremulous, gait unsteady, appetite fair but capricious, gastric oppression after meals, bowels constipated. Patient appeared to be brominized.

Treatment.—Resorcin 3 grs., in a half pint hot water, an hour before lunch and dinner. He was ordered to be at once well scrubbed with soap and water. This was followed by a wet pack, sheet wrung out of water at 70°, reduced daily two degrees. This to be followed by a rain bath at 90°—25 pounds pressure, gradually reduced during 30 seconds to 75°.

August 20th.—This treatment had been used daily, the

temperature of the bath being reduced two degrees every day. He had a slight attack five days after treatment was begun—none since. He was ordered to Long Branch to take surf baths.

September 20th.—Patient has called on me several times, reporting steady improvement. He is discharged cured. Up to this writing, Jan. 1st, 1893, no further attacks have appeared.

Besides these, there were a number of cases of chronic rheumatism, neurasthænia, bronchitis, asthma and sciatica, sent to the Institute for treatment by Drs. Starr, Dana, Geo. Jacoby, Sachs, Lezynsky, Walton, Teschner, Pritchard, Willy Meyer, Allen, Schœney, Lincoln, Offenbach, Sayre, and others, the results of which will doubtless be reported by some of these gentlemen.

If the few clinical histories here offered will induce practitioners to utilize water more frequently as one of their remedies, I will be content.

In my propaganda for hydrotherapy, I have, in some quarters, been charged with unwarranted enthusiasm. If a conscientious proving of all remedial agents in vogue and proposed during an active general practice of thirty years, entitles a man to an opinion on therapeutics, I would reiterate, with emphasis, the conclusion given in Hare's *System of Practical Therapeutics*.

To sum up the aims, capabilities and results of hydrotherapy, it may be said: We possess in this method a valuable auxiliary to methodical treatment of many, *though not all*, acute and chronic maladies.

In many chronic diseases, it has proved so successful, after failure of medicinal remedies, that *no case should be yielded up as hopeless until hydrotherapy, in some form, has been tried*. My observations at the Montefiore Home, which receives only incurable cases, demonstrate this fact.

Domestic treatment will suffice in most cases, but if these fail, a methodical treatment, under an expert hydrotherapist, may be of advantage to the patient.

The best consultants in Germany, Italy, and France—men like Leyden, Charcot, Nothnagel, and Erb—send their

patients to these Institutions, with their diagnosis and general suggestions, rather than with specific directions.

Finally, so much depends upon the re-active capacity of each individual that only systematic observations can determine the most useful procedure in each case.

51 *West Seventieth Street.*

ART. V.—**Hysterectomy with Report of a Difficult Case Successfully Treated.**

By **CHAS. G. CANNADAY, Roanoke, Va.**

MEMBER OF GYNECOLOGICAL SOCIETY, LONDON: MEMBER OF AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION, ETC., ETC., ETC.

The operation of removing the uterus for malignant diseases, for inversion and myoma, is certainly not a modern surgical procedure, for strong evidence is on record that the ancient Greeks practiced it. Soranus, of Ephesus, 100 B. C., wrote of the operation, but it must have been forgotten or passed into disrepute, for no record appears of its performance until the sixteenth century, when Andreas, a Cruce, performed it. Subsequently (1813) Langenbeck did it for cancer—the patient living for 30 years afterwards. Then followed Sauter, Blundell, Recamier, Siebold, Burnham, Kimball, Keith, Bantock, Tait, Bernays, Price, and many others, with such brilliant results as to entitle the procedure to be classed as a justifiable operation. Indeed, such fine results have been obtained that to-day what was a few years since a failure and considered daring surgery is successfully performed in every country laying the remotest claims to civilization. This is, thanks to Lister (who has been misrepresented when it has been stated that he operated regardless of cleanliness and antiseptic precautions, for I have seen no more careful or neat operator), due to his researches, coupled with the attention to details which modern surgery has adopted.

The operation of removing sessile growths, and leaving

behind a pathological condition of the uterus for subsequent return of the disease, is certainly not scientific surgery. It is not to be regarded as an easy operation to perform, and with few instruments, as a certain operator would have us believe. The close contiguity of bladder, ureters, and other important structures, renders it the most delicate and difficult operation to be encountered, and a knowledge of relational anatomy is of extreme importance practically, and surgical advancement is of such a marked degree in the last few years that no surgeon ought to attempt cœliotomy or cœlio-hysterectomy who has not recently taken means to render himself familiar by study, dissection, operation on the cadaver, or practical experience with every anatomical and technical detail of the operation, as well as the after treatment (for this is very important).

The operation is of two kinds, viz: Kolpo-hysterectomy and cœlio-hysterectomy. The former is quite difficult to perform, and is limited to cases in which the tumor and uterus is small. The latter, as before stated, is one of the most serious operations that can be attempted, but when properly done by those familiar with the details, the results are surprising. But I do not think an operation should be attempted by any one unless the necessary instruments are at hand to treat any complication that may arise, for shock is one of the great barriers to major operations, and the less time consumed in the operation the less danger from this source. Swift operators, such as Bantock, of London, Martin, of Berlin, and Bernays, of St. Louis, have their success in a great measure due to their rapidity as well as their familiarity with the work.

No operation has had its mortality so lowered in the last few years by perfection in its details and operative methods. In 1883, Bigelow (in *American Journal of Obstetrics*) was able to collect 573 cases with 311 recoveries and 241 deaths, the remainder not being recorded. Gusserow's reports comprise 359 cases, 1876 to 1885, with 237 recoveries and 122 deaths. Olshausen, Braun and Schroeder combined, at the same time did 180 cases. The results, taken together, showed a

mortality of 30 per cent. Keith has in the last few years reduced the mortality in most unpromising cases to 8 per cent., a result not before obtained by any other surgeon. Tait, Bantock, and Thornton are getting equally good results in their later cases, and a score of operators on the continent and in this country can be named whose results are less than 15 per cent. mortality.

But an operation of this magnitude should not be performed unless the indications clearly prove that the life of the patient is threatened, that the menopause is not likely to soon be reached, or that the tumor (if present) is of such dimensions as to seriously disturb the physiological functions of adjacent organs.

The treatment of the pedicle has been the bone of contention chiefly in this operation. Most English operators prefer the extra-peritoneal method, claiming for it advantages over the intra-peritoneal, while advocates of the intra-peritoneal are equally persistent in their claims for the latter method. Among the most noted of the latter may be mentioned A. Martin, of Berlin, who after having fairly tried the two, abandoned the former; but the bulk of the evidence is in favor of the extra-peritoneal methods when a pedicle can be secured of such length as to justify the procedure; but no definite rule can be laid down for our guidance, each case being a factor unto itself, so to speak, and quick judgment dictating what shall be done, though with the latter method it should almost invariably hold true that drainage be employed.

The following case having a large abdominal tumor, I have selected as proving that cœli-hysterectomy is as free from danger, if properly done and under the proper conditions, as any other surgical procedure of similar magnitude, for this patient was in poor condition, the tumor of the largest kind, and the result was in every way satisfactory:

Susan F., age 28, married 10 years, mother of five children, was admitted to my private hospital, Rebekah Sanitarium, in this city, September 9th, 1892, suffering from an attack of peritonitis, temperature 103.5, pulse 130 and very weak.

Family history reveals phthisis—father, sister and two brothers having died with it. Catamenial periods came on at 13, and presented nothing abnormal as to recurrent amount of flow and duration until married. Health was good and confinements normal until her last pregnancy, which occurred in June, 1889. It presented nothing of importance prior to confinement, except the occurrence of more than 20 boils and abscesses on different parts of her body. She had weighed 165 pounds, and was rather tall and fleshy; during the last twelve months she had lost in flesh rapidly, and was quite thin. March 30th, 1890, she was in labor nine days under the care of a mid-wife, and after much suffering a fine baby was delivered. The placenta came away 24 hours afterwards—the tardiness in each instance being due to the location of the tumor. Her puerperium extended over a period of seven weeks, and her suffering was considerable. Immediately after confinement, she noticed a tumor above the pubes, which was movable, and it enlarged rapidly until it filled the abdominal cavity, rendering locomotion difficult and painful. The bowels were always costive, the urination frequent and scanty; had a profuse leucorrhœa, and at times was confined to bed by attacks of peritonitis. She had been attended by several physicians, and had been salivated with the vain hope of relieving her (!) After four week's treatment the temperature became normal, and the patient able to move about in the house. Measure around the abdomen at level of umbilicus was $42\frac{1}{2}$ inches. A hard round tumor filled the abdominal cavity to the sternum. Just above the pubes and in front of and attached to the large tumor was a smaller triangular one, measuring $6\frac{1}{2}$ inches across its base, and having its apex just below the symphysis pubis. The sound entered this triangular tumor, which was supposed to be the enlarged uterus, and so it proved subsequently. The catheter on entering the bladder showed that organ to lie wholly in the neighborhood of the left iliac synchondrosis, and to be very much enlarged and compressed, the whole pelvis being filled with a solid tumor. From the amount of discharge from the vagina, it was thought that a cyst might be found at some place in the tumor. Owing to the fact that the patient was gradually losing in flesh and strength, that she depended on an active life for her support, that the menopause was at least 12 or 15 years distant, and that the pressure was jeopardizing adjacent organs, an operation was decided upon, and it was thought that a hysterectomy would most likely be neces-

sary and the family so informed. The catamenial periods came on every three weeks and lasted nine days, and it was necessary to avoid this time.

October 9th, 1892, I operated, there being present Drs. S. G. Staples, H. E. Jones, and A. A. Cannaday, all of this city, each of whom rendered valuable assistance. The operation was aimed to be aseptic in every particular, the sterilizer being used for bandages and instruments, the room especially prepared after the German method, etc. Chloroform was used, as the patient had a family history of phthisis. The primary incision was made, owing to the position of the uterus, in the linea alba, immediately below the umbilicus; the abdominal walls were very thin, and it was found that the tumor had stripped the peritoneum from off the front. The tumor, a sessile myoma, was vascular and



(a) Fundus of uterus (the uterus divided from fundus to near cervix, after being removed). (b b) Right and left broad ligaments with Fallopian tubes and ovaries. (c) Cervical portion of uterus. (d) Portion of tumor removed above the elastic ligature subsequent to the uterus. (e f g) A solid myoma intimately connected with the posterior wall of the uterus. (h) Fundus of uterus, showing endometrium red and deeply injected with blood in each cornua and over the whole upper third, showing that the menstrual period had commenced.

solid, was intimately connected with the whole posterior wall of the uterus. The incision was extended upwards to the sternum, and downwards to within an inch of the pubes, then the tumor was withdrawn with difficulty. Extensive adhesions were found in the right and left portions of the pelvis; the broad ligaments were ligated, and removed along with the ovaries and tubes; the adhesions separated; a temporary elastic ligature secured the pedicle, which was with difficulty gotten from the cervix. A Koeberle serre-nœud carrying a delta wire was used as a permanent con-

strictor, and the pedicle secured by skewers after the manner of Schroeder, as modified by Tait and Bantock. The adhesions bled freely, and were with difficulty controlled. The abdominal cavity was flushed with hot water, and a glass drainage tube inserted, and left in for thirty-one hours. The abdomen was closed, and the patient put to bed. The operation lasted a little over three-quarters of an hour. The tumor, a solid myoma, weighed thirty pounds, and the ovaries were very much enlarged. The patient rallied and did well, except a cough developed, which annoyed her very much, and grave fears were entertained as to its being phthisical, but it subsequently proved to be bronchial.

On the 20th inst., eleven days after the operation, the abdominal wound was examined (in the presence of Dr. A. Z. Koiner, of the city, specialist of throat and lungs, who rendered valuable suggestions as to cough), and union was found to be perfect. On that day the stitches were removed. The cough continued, and on the following day she vomited, and complained of pain at umbilicus. Examination revealed the fact that the adhesions had torn loose, and the intestines were found protruding, and glued to the edges of the incision. They were carefully washed, and adhesions separated, and new stitches again inserted, and the patient's recovery was uneventful. The treatment was that usually adopted after coeliotomies. In twenty-five days after the operation she was able to leave the Sanitarium for a friend's house, one and one-half miles distant, and in fourteen days more she was able to be moved to her home, seventeen miles distant, a greater part of the journey over a rough road in a spring wagon, and at this writing, fifty-four days after the operation, she is able to do her own work, and is gaining her flesh rapidly.

She measured after the operation twenty-two inches around the waist.

Subsequent to the operation she complained of reflex neuroses, such as severe burning of the skin, neuralgia, &c.

This case leads me to conclude that this operation, if deemed advisable, should not be withheld from the patient on the grounds of the danger from its magnitude; that if a cough persists, seven to eleven days is too soon to remove the stitches.

That in protracted labors, without assignable cause, look for tumors in interine wall.

ART. VI—Notes Upon the Therapeutical Action of Thiol in the Treatment of Skin Diseases.*

By T. N. McLAUGHLIN, M. D., of Washington, D. C

LECTURER ON DERMATOLOGY MEDICAL DEPARTMENT NATIONAL UNIVERSITY, ETC.

The sulphur compounds have always been considered of the greatest utility in the treatment of various dermatological lesions, both when employed internally and externally; but in many instances their application has been restricted on account of the objectionable odors which attended their uses.

During the past few years, a preparation called ichthyol has been extensively employed, this being a product of distillation from the deposits of pre-historic fish and marine animals. This has failed to meet all requirements on account of the odor, a property common to all organic sulphur compounds, which, in addition to the sulphur—the quantity being of an indefinite character—contains other by-products having a disagreeable odor, the result of decomposition.

The *chemical nature of thiol* is indicated by its method of preparation, for which information I am indebted to Messrs. Lehn and Fink, of New York.

Thiol is produced by artificially sulphuretting unsaturated, high-boiling hydrocarbons of a more or less definite nature, as indicated by their physical constants, and extracting the crude "thiol oil" thus formed with alcohol. The solvent is allowed to evaporate and the oil treated with concentrated sulphuric acid, the mixture being kept cool; the reaction being complete, broken ice is added to the mixture, when the thiol separates. All that now remains is to wash out the bulk of adhering acid with water to neutralize the last fractions with ammonium salt thus introduced into the preparation. The final product is a solution of pure thiol, which is evaporated in vacuo to a thin extract—*thiolum liquidum*, or to a complete dryness—*thiolum siccum*.

* Extract from a paper read before the Medical Society of the District of Columbia, at its meeting on February 1, 1893.

Thiol is dark brown in color, with a pleasant odor, neutral in reaction, and with a specific gravity of about 1.080. It is readily soluble in water, and partly dissolves in alcohol and ether. Thiolum liquidum is a watery solution containing 40 per cent. of thiol. It has been employed in the treatment of the following diseases:

Eczema of the nares.—This eruptive condition manifests itself in children of a strumous diathesis. The nasal orifices are partly closed with crusts, which when removed leave an ulcerating surface exposed.

In adults suffering with a *follicular eczema of the hairs within the nares*, and a *pustular eczema of the upper lip*, the same treatment was employed.

Attention was given to the general health of the patients. Cod-liver oil, iron, and the hypophosphites were given internally. Local treatment consisted in removing all crusts by free inunction of oil, opening the pustules, and thoroughly cleaning the surfaces with an antiseptic solution—dilute hydrogen per-oxide, listerine, and boracic acid solutions being employed for this purpose. Then an ointment of

Thiol..... ʒj.
Lanoline..... ʒj—Mix.

Was applied to the surface.

Eczema Intertrigo.—In several cases suffering with this affection, the surfaces were kept dry, dusted three times a day with thiolum siccum, and the surfaces kept apart by the interposition of a layer of patent lint.

Eczema of the face.—In two cases of eczema erythematousum, the face was dusted frequently during the day with a powder containing equal parts of zinc oleate, zinc carbonate impure and arrow root. When the acute inflammation had subsided, thiolum siccum was dusted over the surface night and morning.

For *Eczema Papulosum and vesiculosum* of the face and ears, it was employed in a number of cases. The surfaces were kept dry.

I am a firm believer that water is one of the most irritating applications that can be made in eczematous erup-

tions, and the good that we have been days accomplishing may be sacrificed in a short time by its injudicious use. This is one instance in which the trite quotation, "that cleanliness is next to godliness," should not be observed, and yet you will find these surfaces being constantly bathed.

For *eczema papulosum*, I have employed *thiolum liquidum* because it adheres well to the surface and dries more quickly.

In *acne vulgaris*, I have prescribed *thiolum siccum* ʒj—ʒij to the ʒj of lard, in addition to the free application of hot water from ten to thirty minutes, night and morning.

In mild cases of *acne rosacea*, it appears to have a controlling influence by causing a contraction of the capillaries.

I had the surfaces in *herpes zoster* painted twice a day with a solution of *thiol* ʒij aq. distil. ʒj, and then covered with absorbent cotton. The distressing symptoms soon subsided; the vesicles disappeared. The scabs which had formed over the exposed parts of the epidermis by the *thiol* were readily removed in a few days, leaving only the marks of the former eruption.

For *herpes progenitalis*, I ordered the vesicles to be dusted several times a day, or else have employed *thiol* gr. 30 to ʒj. Collodion applied with a brush (one application) has frequently been all that was required.

I am now employing it in the treatment of two cases of *ichthyosis*, and find it gives the same result as *ichthyol*.

In *furuncles* and in one case of *carbuncle* it proved highly beneficial. It appears to lessen the tension of the tissues, allays the pain, and checks the suppuration.

In *contused wounds* it is exceedingly serviceable; it reduces the pain, and promotes absorption.

In the treatment of all these cases, special attention was given to improving the general physical condition of the patients, by carefully regulating the diet, removing the cause when it could be ascertained, and by a thorough course of internal treatment.

When *administered internally* there is no disagreeable taste or odor, no repeated belchings, as follows the use of *ichthyol*.

The dose varies from three centigrammes to one gramme

three times a day. Deleterious effects have not been observed.

It possesses the following *advantages over ichthyol*: It is odorless. It is non-irritating. It can be readily removed from the surface. It does not stain the clothing. All the desirable therapeutic properties possessed by ichthyol may be claimed for thiol.

1226 N. St., N. W.

Clinical Reports.

Case of Early Diagnosis of Tubal Pregnancy.*

By HUGH M. TAYLOR, M. D., of Richmond, Va.,

PRESIDENT MEDICAL EXAMINING BOARD OF VIRGINIA, ETC.

The etiology, pathology and treatment of tubal pregnancy is an almost settled problem. Not so, however, as to its symptomatology; and the average practitioner must admit that intuition and guessing are large factors in a case in which an early diagnosis is verified. Not only is this true of the average practitioner, but, to a less extent, it is also true of practitioners of the largest experience; and when men like Tait, and Price, and others, with their large fields of observation, and with the flood of light recently thrown upon this subject by themselves and others, fail to group symptoms confirmatory of a positive diagnosis, we can appreciate its difficult nature.

In the following case, which came under my observation a few weeks ago, the chain of symptoms appeared to be unusually closely linked; and as the symptoms were manifested as early as the sixth or eighth week, it may be classed as an early diagnosed tubal gestation:

Mrs. H. consulted me first in my office; she was 39 years old; had been married eleven months; had menstruated regularly until her last period, which she had passed with-

* Reported to Richmond Academy of Medicine and Surgery, January 24th, 1893.

out any show. She had just passed the time for her period—the second one she had missed—when I saw her. Supposing conception to have occurred ten days after the last normal menstrual period, we could count about fifty days, or seven weeks, of suspended menstruation. She did not think herself pregnant, because five or six times since she ceased to menstruate normally she had had some show, lasting several hours each time; and upon each such occasion she thought and felt as if she was going to be unwell. She had suffered decidedly from gastric disorders, and very often had paroxysms of cramp-like pains in the right iliac region, and almost constantly a consciousness of something wrong in that locality. To lessen the significance of this last symptom, she said she had suffered with a pain in the right side at intervals for several years, and about two years ago consulted Dr. Hunter McGuire about it. She also said that Dr. McGuire had treated her for some uterine trouble five or six years ago.

An examination, which I had just made, failed to show an appreciable change in the breasts, vagina, cervix, or uterus, but to the right of the uterus, low down in the pelvis, there was easily detected, as the patient was then, a little mass about as large as an English walnut, and egg-shaped. What could it be?—an enlarged tube, ovary, appendix, faecal mass, or displaced uterus? I thought the group of symptoms sufficient to warrant the conclusion that it was a case of tubal pregnancy.

I requested the patient to meet me the next morning at the office of Dr. Hunter McGuire. That night I was called out of the city, but, before going, I wrote to Dr. McGuire, asking him to examine the patient for me, and telling him of my diagnosis. Dr. McGuire saw the patient, confirmed the diagnosis of tubal pregnancy, and, of course, under the circumstances, united in urging immediate operative interference.

On my return to the city, after an absence of twenty-four hours, I went to see the patient, and was sitting by her telling her the nature of her trouble and the need of an immediate operation, and while occupied in breaking the sad news to her as gently as possible, she suddenly clapped her hand to the right side of her abdomen, cried out with pain, and was about to fall, when I caught her. My first impression was that she was fainting from shock and fright, but the profound and continued shock and collapse soon told the story of rupture, hæmorrhage, and shock and collapse incident thereto.

The rapidity with which the symptoms of extreme collapse followed the first evidences of rupture was appalling. In twenty minutes, she was pulseless, sweating, clammy, thirsty, blanched, and presented all of the symptoms of profuse internal hæmorrhage. The patient realized that something dreadful had happened, that her life was in danger, and begged that an operation be done at once. She said she felt as if she was going to be taken unwell. The pain was sharp, and lasted for half an hour or more.

In an hour and a half, she had been taken in a hack to St. Luke's Hospital, her belly opened, the ruptured sack removed, with a quantity of blood from the peritoneal cavity, and the patient in bed. In spite of this prompt treatment, the patient had bled to death; and our best efforts before and after the operation failed utterly to induce the slightest tendency towards reaction.

As far as I know, very few physicians have had the opportunity of witnessing all of the phenomena incident to rupture of a tubal pregnancy.

I have reported the case in detail because of the grouping of symptoms. None of them were pathognomonic; all of them are common in other pelvic troubles, but are significant when occurring together. A history of previous tubal and uterine trouble, and consequent sterility; suspended menstruation; irregular, intermittent, uterine flow; gastric disorder; pain, and pelvic tumor, present, I think, more than the usual number of symptoms of tubal gestation in its early stage.

Recurrence in a Case of Abscess of the Epiglottis*.

By FRANK T. CHAMBERLIN, M. D., Washington, D. C.

In the *Medical Record* of April 11th, 1891, I reported a case of Cold Abscess of the Epiglottis, of which the following is a synopsis:

Nov. 28, 1890.—U. B., male, age 28 years (colored); no specific or tubercular history. Duration of uneasy sensation in throat four years. Difficulty of respiration at times, and troublesome desire to swallow. Dysphagia cause of patient

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, January 9th, 1893.

applying for treatment. Mouth-full-of-mush character of voice. No history of foreign body or injury to laryngeal or pharyngeal cavities other than that which might have been produced by stimulants, as patient was what might be termed a heavy drinker.

Inspection showed a large buccal cavity, with tumor extending behind and above the palate about three-fourths of an inch, resembling a small intestine inflated with air, and about the circumference of a keat egg. On swallowing, the tumor would disappear. Surface of tumor covered with arborescent vessels, originating from two main trunks running parallel with its long diameter. Inflammatory appearance slight, probably owing to a stimulant taken before examination. Feel of tumor indicated fluid. There was considerable anaesthesia of the part, but I was unable to locate attachment with the finger owing to length of pharynx and occlusion of cavity by the body. Laryngeal mirror failed to help matters, owing to obstructed view.

On *Nov.* 29th, in the presence of Drs. Bowen, Beatty, Carraher and Safford, I applied a 4 per cent. solution of cocaine hydrochlorate, and aspirated the tumor, but succeeded in getting only a few drops of yellowish fluid, which proved later under the microscope to be pus. An incision with the bistoury gave a little over two and a half ounces of fluid; the sac contracting as flow went on, necessitated holding same with forceps to prevent its slipping from view. After perfect evacuation of sac, laryngeal mirror gave appearance of a laryngitis and the epiglottis, with the epiglottis slightly depressed in the center with a doughy look of the anterior surface. Further inspection with the forceps showed that the membrane was completely undermined with the exception of a slight portion of the left side, and that the tissue was so elastic as to give the organ almost its normal appearance with the above exceptions.

Appearance of pharynx after evacuation of tumor tended to substantiate history given by the patient as regards the time of its presence. Sides of pharynx about pillars highly hypertrophic, while the posterior surface extending up and back of the palate was so worn away as to almost outline the bodies of vertebræ. After treatment, rest of organ for a time and liquid diet.

Nov. 30th.—No inflammatory conditions, but sensation of something to be swallowed still present; sedative lozenges prescribed.

Treatment later for condition of pharynx partly successful.

At the time of writing, which was in Jan., 1891, there had been no refilling of the sac, and the organ was about normal in size.

I lost track of the patient soon after, and did not see him again until the 20th of the following *July*, 1892, when he returned to me for treatment, owing to a return of all of the previous symptoms. The appearance of the tumor was about the same as before, except a little larger and more tense. The dyspnœa had increased, and the sense of swallowing something became a reality, as at times there was a decided attempt on the part of the patient to swallow the abscess, epiglottis, and all, which would set up a violent cough, which was usually followed by vomiting, giving relief to the paroxysm for the time. The parts about the tumor were inflamed and angry looking, with hyperæsthesia sufficient to necessitate the use of cocaine before making an examination.

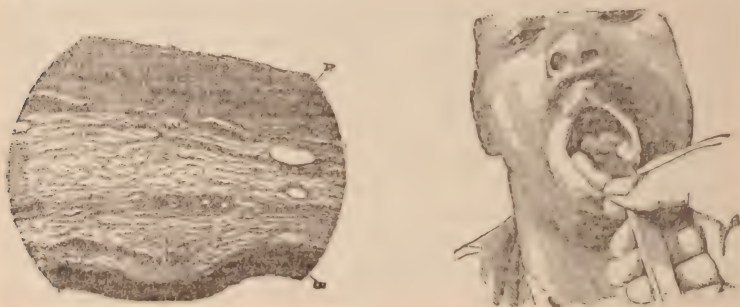
On *July 21st.*—Present Drs. James Kerr, Sinclair, Bowen, Watson, and Duffey. I proceeded to evacuate the cyst as on the first occasion. The sac, on being emptied, proved to be far less elastic than in the first instance, and threatened to give trouble to respiration by falling over into the larynx. It was seized with laryngeal forceps and tenaculum, and the entire undermined portion removed close to its attachment with a pair of laryngeal-curved scissors—three attempts being necessary and three pieces of tissue being the result. The small attachment of the membrane to the left anterior surface to the extent of about $\frac{1}{8}$ th of an inch still existed and was left intact; so with this exception the entire anterior surface was removed. The three pieces removed would have measured at least three inches square after contraction.

The patient suffered considerably in spite of the free use of cocaine before and during the operation, the excessive spasm of the parts increasing greatly the difficulties of the procedure. The hæmorrhage following the operation was considerable, but of short duration. The epiglottis after the operation was considerably larger than in the first instance, being so flattened out as to completely obscure a view of the larynx. The movements of the epiglottis were faulty for some days, causing difficulty to respiration and deglutition.

The after treatment was by the insufflation of iodoform, zinc oxide, and sulphate of morphia, with a milk diet. The patient was again lost sight of in about fifteen days.

The possibilities of the abscess being the result of tuber-

culous ulceration was settled by Dr. W. M. Gray, Microscopist Army Medical Museum, to whom I am indebted for the accompanying micro-photographs and the following report:



(a) Upper or external surface.
(b) Inner surface or lining.

“WASHINGTON, D. C., Sept. 14, 1891.

“*My Dear Doctor*,—A section of the tissue removed by you from the abscess of the epiglottis shows the following: The wall is composed of a band of dense fibrous connective tissue, containing blood vessels and nerves, and lined on both its external and internal surface by a mucous membrane, composed of squamous epithelial cells. I believe this abscess to have developed from one of the ducts leading from the submucous glands of the epiglottis.”

On July 15, 1892, I was fortunate enough to get another examination, which showed the epiglottis to be of about normal size, but of a decided omega shape, which gave a view of the cords, probably due to a contraction of the glosso-epiglottic ligament following the operation. All of his previous symptoms had left, and he expressed himself as entirely well. The pharynx still showed the past presence of the growth, but gave him no trouble.

In conclusion, should a similar case present itself to me, I should remove the sac after evacuation, instead of waiting hoping for a spontaneous cure as I did in the first instance; and I doubt, had I removed a larger button of the membrane than I did in the first instance, if anything more would have been accomplished, as the sac would probably

have refilled later or have left a pocket in the organ as a receptacle for food.

Jan. 8, 1893.—Saw patient again, and laryngeal examination gave results similar to those of July 15, 1892.

226 New Jersey Ave., S. E.

Report of a Case of Gun-Shot Wound Through the Knee-Joint, with Recovery Without Limp.

By JOHN WALKER, M. D., of Lynchburg, Va.

Having recently dismissed a case which has been of much interest to me, I deem it not undesirable to report it, hoping it may prove to be of some interest to any one who may take the time to read it.

The case is one of gun-shot wound through and through the knee-joint, with recovery without limp. I was called Sept. 23d, 8 P. M., to see Miss K., age 16; family history good, and previous health good. Upon examination, found the girl had received a wound from a Smith & Wesson pistol, ball No. 32, discharged in the hands of another lady, accidentally, while taking the pistol from the mantel.

The ball entered the knee-joint just at the tibia-femoral articulation on the inner side of the joint; passing through the joint, spent its force just about the time it reached the soft tissues on the outer side of the limb, where it could be felt without difficulty.

As the patient was suffering great pain, I gave at once, hypodermatically, morphinæ sulphas gr. $\frac{1}{4}$, and atropinæ sulphas gr. $\frac{1}{50}$ th; after which the limb was washed with bichloride of mercury 1:1000; then with hypodermic syringe, thirty (30) minims of a 4 per cent. solution of muriate of cocaine were injected over the site of the ball. After having waited a few minutes for the cocaine to anæsthetize the part, with a bistoury, I made an incision about an inch long through the skin and subcutaneous tissue, down to the bullet. The ball was then lifted out of its position by a small pair of forceps, passed into the wound.

The offending substance having been removed, the wound was washed with bicloride of mercury solution 1:2000; aristol was dusted into the wound, which was covered with absorbent cotton, firmly bandaged on. The limb was put into

a long splint, extending from the hip to the ankle-joint, thus securing absolute rest to the joint.

On the following evening, Sept. 24th, the patient was suffering severe pain in the joint, temperature 103° . To relieve the pain, a hypodermic of morphinæ sulphas gr. $\frac{1}{4}$, and atropinæ sulphas gr. $\frac{1}{150}$ th was given, and a prescription was left for antikamnia $\mathfrak{5j}$ in twelve powders, one to be given from one to two hours, according to circumstances.

Sept. 25th, 6 P. M.—Temperature, 102° ; patient still suffering some pain, which was largely relieved by the antikamnia. No action from the bowels having taken place since the injury, a powder containing calomel gr. iv, pulv. ipecacuanhæ gr. j, and sodæ bicarbanas gr. xv was given while there. No result having taken place in six hours, this was followed by magnesia sulphas, which produced several free evacuations, after which the temperature fell to about 101° by the evening of the 26th, when she was seen again.

On 27th, patient was still suffering severe pain in her knee, which was again relieved by morphine $\frac{1}{4}$ gr., and atropia gr. $\frac{1}{150}$ th. A pillow was placed under the joint to prevent so much tension upon the flexor muscles about the joints. Temperature 100° about 6 P. M. After this, the patient was not seen for two days, when the temperature was 99.5° , pain only slight; wound was redressed, and found to be in a perfectly healthy condition. The wound was again cleansed with bichloride of mercury solution 1:2000, and dusted with aristol, each wound still being kept open for drainage.

Oct. 23d.—Between the date last mentioned and this the patient has been seen at intervals of from three to four days, and found to be doing well. The wound was dressed twice in the meantime, and found to be in a healthy condition each time. Temperature range was about normal after the first ten days. Pain decreased gradually until it had all disappeared to return no more, except upon movements of the joint, which continued up to about the last of the fourth week.

Oct. 23d.—The splint was removed and the wound dressed just as before; it was pretty much healed. The movement of the joint was seen to be good, though not yet perfect, owing to having been kept straight for so many days. The splint was re-applied and kept on for another week, when it was again taken off permanently, and the motion was good, with the exception of the slight stiffness, above referred to;

external wound completely healed, and needing no further dressing. The splint was not re-applied; the patient was allowed to sit up in the room, but not to use the limb in walking for another week.

At the end of the sixth week, the patient was seen and discharged with her knee in apparent perfect condition; *motion of the joint normal*. The patient is now walking without a limp and without ever having had a drop of pus in the wound, which is contrary to what is usual with most gun-shot wounds of the joints.

In the Confederate army, during the late war, the death rate of gun-shot fractures of the knee joint was 60.6 per cent.

After having given a summary of a large number of cases of gun-shot injuries of the knee joint, Ashhurst makes the following remark: "The rule should still be regarded as imperative, that every gun-shot fracture of the knee joint is a case for amputation."

Knowing what Dr. Ashhurst says of such injuries, I decided it would not be without interest to some one to have the report of so grave a case with so satisfactory a result to the patient and surgeon.

Tracheotomy at Nineteen Months—Recovery.

By O. M. SMITH, M. D., of Palmyra, Va.

On the evening of September 8th, 1890, I was called very hurriedly to see little Nann'ie A——, aged nineteen months, the only daughter of a fond mother and father. The history I received of the case is as follows:

On the date above mentioned, the husband and father being away from home, Mrs. A—— left little Nannie in care of her brother, about eight years old, and went to a neighbor's house about half a mile distant. While she was away, the boy hulled and divided in half an average size chinquapin, giving half of it to his little sister, who, of course, child-like, readily and eagerly took it in her mouth, when she directly drew it into the trachea. When the mother returned the child was breathing badly, and, on inquiry, she elicited from the boy the foregoing.

When I arrived, the breathing was of a croupy nature,

on account of spasm of the larynx—the foreign body moving up and down with expiration and inspiration. I tried to expel it by causing vomiting, by gravitation and holding child up by feet and shaking it when vomiting, but ineffectual was all of this. I told the family that I would have to perform tracheotomy or the child would die, at the same time suggesting that they send for a brother Doctor. They then sent for Dr. George Doughton. He came, but did nothing more than had already been done, but suggested that we should not urge an operation, that the child would very probably die under the operation.

On the morning of the 9th, Dr. John L. Smith was sent for, who, after full examination, was favorable to the operation, but then came the “tug of war.” We had then the family, with neighbors back of them, to encounter, saying that to “*cut the child's throat*” would certainly kill it. (The operation never having been performed previously in that community, they were ignorant of its effects.) I visited the child twice a day, and on the 10th they were still opposed to surgical interference. The child now had what I chose to call *traumatic-obstructive pneumonia*. I gave it—

Ry.—Carb. ammon.....gr. x.
 Tinct. digitalis..gtt. x.
 Tinct. opii camph..... 5j.
 Fl. ext. ipecac..... .gtt. v.
 Aqua q. s. ad.....5ij.

M. Sig.—Teaspoonful every 3 or 4 hours.

Also I gave quinine.

On the morning of the 11th, Drs. Smith, Doughton, Carson, and I, met to get full consent or a positive no from the family. After an hour or so of consultation, they agreed to the operation. We then went at it.

Large pans of boiling water were sitting about the child, which contained carbolic acid. This produced sufficient moisture. Instruments were placed in a carbolized solution. I then laid the child upon the table and chloroformed it, when Dr. Carson kept it up. Dr. John L. Smith watched with his experienced eye and touch the respiration and pulse, Dr. Doughton handing me instruments. I placed a small roll under back of neck to make the skin and tissues tense, thereby facilitating the use of the scalpel, with which I made an incision about one and a half inches in length in the skin. I then divided the cellular and other tissue down to the trachea with the handle of the tenaculum, only breaking one small artery, which I immediately ligated by

torsion. Then hooking my tenaculum firmly into the trachea, by which I was enabled the more firmly to hold it, I then introduced a small, sharp, curved bistoury into the trachea at the lower margin of my first incision, cutting upwards the length of the trachea about an inch. My retractors were put in place before I made the last incision—they were unique. In the absence of surgical retractors, I manufactured an excellent pair out of two ordinary hairpins. When I completed my last incision, I made a small loop out of silver wire, with which to loosen up the imbedded half chinquapin, it being found just below the bifurcation of the trachea in the right bronchus, completely obstructing the breathing in that lung. The trachea and lung would not tolerate tracheotomy forceps; so I loosened up the obstruction with my silver loop. Leaving the wound open, the child blew the chinquapin out through it.

At the time I left, I placed a piece of oil gauze over the wound and left it open. When I returned, I found a purulent discharge from the wound, with the products of inflammation also. The wound was left open for five days, when all the husk that surrounds a chinquapin was discharged. I then closed the wound with adhesive strips.

The wound healed by granulation, and when I saw the little girl last, there was only a pearly scar about a quarter-inch long. She is now a hearty, strong girl, back in Western North Carolina, where I then lived.

I would give any patient the chance of life from an operation if I honestly believed I could only prolong life for only half an hour. A half an hour is sometimes worth a great deal to a dying man, and if not worth so much to him, it is a consolation to his friends.

Abdominal Dropsy Mistaken and Operated Upon for an Ovarian Cyst.

By A. S. PRIDDY, M. D., of Keysville, Va.

The following case came under my care some months ago, and although it is of some interest, I have not reported it because of my chagrin at the mistake in diagnosis, which led to an exploratory incision of the abdomen before the true nature of the case was made plain. In reading a re-

port of the November meeting of the Medico-Chirurgical Faculty of Maryland, I noticed a report of a similar case occurring in the practice of Dr. Robt. T. Wilson, of Baltimore. A mistake made by such an eminent surgeon and astute diagnostician as Dr. Wilson has so much consoled me, that I am emboldened to report my case, which is, I think, quite similar to his, since he says they are very rare—Sir Spencer Wells having reported only one.

Eliza C——, colored, married, and mother of ten children, aged 40 years, with no family history of scrofula or consumption; general health good; consulted me first in July, 1890, about an enlargement of her abdomen which she thought was pregnancy. But excluding pregnancy by the regularity of her menstrual periods and the length of time during which her swelling had grown, I proceeded to examine the abdomen, and found an enlargement to the left of median line, with dullness on percussion corresponding to a radius of six inches from the left ovary, but clear in other parts of the abdomen and unaffected by change of position. I pronounced it an ovarian cyst, and advised an operation.

In March, 1891, while I was in consultation with one of the most skillful physicians in Southside Virginia, on the plantation on which this woman lived, she came to the house to get him to examine her. I did not tell him that I had ever seen her, and he soon came in and said that there was a case of ovarian cyst for me to operate on; the abdomen had much increased in size.

I saw her no more until June, 1892, when she came to town for an operation. Her abdomen was as large around as a flour barrel, and the whole cavity of the abdomen seemed filled. She was a very small woman, weighing not more than ninety pounds before the swelling commenced.

I made preparation for an aseptic operation, and on June 3rd, assisted by Dr. A. D. Drew, of the University of Virginia, late House Surgeon of St. Luke's Home, Richmond, who was then spending his vacation at home, and Drs. Gregory, Gilbert, and Walker, I proceeded to make an exploratory incision. At the first stroke of the knife the abdominal cavity was entered (the recti muscles had atrophied and the walls of the abdomen were only a few lines thick), and a translucent fluid of the consistency of treacle gushed forth to the quantity of about sixty pounds, and after which about a pint of dark-clotted blood. On passing my fingers

into the cavity, the small intestines were found matted together, and the lower half of descending colon thickened and enlarged to nearly double its natural size. I drew some of the small intestines into the wound, and found them thickly studded with tubercles. The ovaries and tubes were normal—unless a little enlarged perhaps. I could not make out a definite sac, as there were so many lymph bands. The cavity was flushed with boiled water, a drainage tube inserted, and the wound closed in the usual way. I removed the tube on fourth day, as all discharge had ceased, and she made an uneventful recovery, going home at the end of the third week. Her general health has been good since the operation, but her abdomen has filled three times, and tapping each time with a large trocar, brought away from four to eight gallons of fluid.

In my opinion, this case started as a circumscribed dropsy, and its increasing size caused a rupture of the sac and filled the whole cavity, misleading most any one who had watched it in all its phases into the belief that it was a large cyst instead of a dropsy.

Correspondence.

Psychical Science Congress during Columbian Exposition.

Dear Mr. Editor,—The *Virginia Medical Monthly* being largely read in the Southern States, I wish to call the attention of the medical men of Alabama, Georgia, Tennessee, and the Southern States in general to the fact that the World's Congress Auxiliary of the World's Columbian Exposition has been organized, with the approval and support of the Exposition authorities and of the Congress of the United States, to have general charge of a series of Congresses, extending from May to October, 1893, in which all branches of scientific discovery and speculation will be discussed.

As I have been urging the importance of mental and psychical science upon the members of some of the leading medical societies of the South for the last three or four years, I now beg to state that a Psychical Science Congress, under the chairmanship of one of our professional brethren, will form one of the most striking and important features of the Congress Auxiliary.

The name of Dr. Elliott Coues, physician, scientist, naturalist, and lexicographer, is known over the whole civilized world; and we, as members of the same profession, are bound in honor to give him our most loyal and cordial support in prosecuting the work of the Psychical Science Congress to a successful issue. Dr. Coues informs me that he expects great results from the Congress. No one man can tell how far reaching will be the generalizations to which the labors of this Congress will point. In this we have a large stake as doctors; for it behooves us to show to the world that we have been alive to the momentous issues involved.

Great scientific developments are almost within our ken, and it behooves the members of the medical profession, if they wish to be considered leaders and teachers in this recondite department of human knowledge, and not mere pupils of the more advanced scientists, to be up and doing, so as to claim their own proper share of the work already done; for it goes without saying that so learned a body of men as the doctors of the Southern States of America must have had experiences and indulged in speculations upon the same, such as must in the ordinary course of events fall within the ken of the average of ordinary observers. Now, all such should be interested in the natural solution of these outstanding facts in the mystery of existence, and throw in their lot with the professed researchers, who have undertaken the management of the Psychical Science Congress.

It is proposed to treat these phenomena historically, analytically, and experimentally. The questions to be treated are as follows:

(a) Thought transference, or telepathy—the action of one mind on another at a distance outside the physiological range of the ordinary instruments of sense expression and impression.

(b) Hypnotism, or mesmerism, including its application to the cure of disease and derangement.

(c) Hallucinations, premonitions, apparitions, and the theories which they suggest

(d) Independent clairvoyance and clairauidience, psychometry (soul interpretation), automatic speech, writing, &c., the mediumistic trance and its relations to ordinary hypnotic states.

(e) Psychophysical phenomena, such as raps, table-tippings, independent writing, and other spiritualistic manifestations.

(f) The relations of the above groups of phenomena to one another; the connection between psychics and physics; the bearing of psychical science upon human personality, and especially upon the question of a future life.

Having thus set forth the program of the Congress, it remains for me to inform my friends and associates that the list of the members of the Advisory Council, in co-operation with the president and other active officers of the Congress, includes the names of those who are second to none in the special departments of science which they represent; so that neither timidity nor diffidence should be urged by any person interested in this region of natural knowledge, as a sufficient reason why he should not be up and doing his proper part in this modern crusade against ignorance, superstition, and despair.

During the time that I had the honor of bringing psychical science before the members of the societies to which I belong, I confined myself strictly to physiological issues; for I considered it my duty to keep the transcendental and religious aspects of the questions I was handling in the back-ground, since I was speaking to doctors and working for doctors as such, in my humble efforts to prevent the entire harvest of plums from falling into the laps of outsiders, be they never so learned. I have always held that everything that can be done and thought must have a physiological and a mundane side, and that, therefore, it fell fairly within the province of the doctor's duty to master the theory of this extraordinary practice as much as in him lay. Nor have I been wholly disappointed in my efforts. While some have been comprehended within the charitable excuse of "invincible ignorance," yet, many of my hearers, and I may say without fear of contradiction, the great majority of them have agreed with me that the time was ripe for the study of that which had hitherto been ignored by the profession as a body, while familiar enough to many of its individual members.

Therefore, I say, let us, with heart of grace, take a hand in the great discovery, and let not false modesty or dogmatic conservatism, since we cannot know everything, compel us to confess nothing. Whatever the religious import of the outcome may be, after the thorough investigation of these subjects, one thing is clear, that to science nothing is unnatural, nothing is contradictory, nothing is independent of the whole.

Dr. Coues our distinguished chairman, will be glad to

hear from those who wish to actively co-operate in this psychic research; and, since the sinews of war are needed in all battles for truth as well as for territory, he will be glad to receive from those who are able and willing to contribute such sums as they may wish to bestow for the promotion of so grand an undertaking. His address is 1726 N Street, N. W., Washington, D. C.

And now, in conclusion, having addressed the medical profession directly through one of its recognized organs of communication, I take the liberty of requesting the co-operation of the secular press in assisting us to reach the ears of the public in general, so that a more extended intimation of the nature and vast importance of the work we have in view may be scattered throughout the South.

I remain, dear Mr. Editor, very truly yours,

JOHN E. PURDON, M. D.,

Member of Advisory Committee Psychological Science Congress.

[Dr. Purdon needs no introduction to our readers in Tennessee, Alabama, Florida, etc. He has always been found a true student of the sciences, a leader in thought, and a progressive, active worker in whatever is promotive of the scientific development of medicine. His own original work has been "the legitimate application of physiology and physics to the construction of a rational theory of human enlargement upon the fundamental principle that matter and mind are the correlative and mutually inclusive aspects of the one supra conscious, but knowable substance, whose modes are, to some extent, graspable in the extended operations of the mathematical laws of human activity—physical and psychical." His letter calls attention to a matter in which we especially trust our Southern profession will take lively interest. It is high time that the Southern profession should be stirred up so as to be represented in the psychical movement. The Psychological Science Congress is announced for the week, beginning August 21st. All inquiries concerning it should be addressed to the Chairman of the General Committee, etc., Dr. Elliott Coues, 1726 N Street, N. W., Washington, D. C.—*Note by Editor.*]

Child-Rape in Texas—An Unparalleled Case.

Mr. Editor,—Much has been said and much written about the recent execution of a negro by burning by the citizens of Paris and the surrounding country.

The citizenship of this place and all the surrounding country—for there was a general uprising of the people far and near who participated in the execution or sanctioned it by their presence—have been branded as murderers, demons, etc. In fact, all the billingsgate epithets known to the English language have been applied to them by people who seem to lose sight of the crime committed by this monster in human shape. They seem to be ignorant of, or they totally disregard, the fact that the negro, Henry Smith, was guilty of a crime which, for enormity, fiendishness, and unfeeling brutality, stands without a parallel even among savages.

A little flaxen-haired girl, aged three years, eight months and five days, was picked up at her father's gate about nightfall by a tall, lean, raw-boned negro man, about 30 years of age and about 175 pounds weight. The negro carried the child to a secluded unfrequented woods, on the outskirts of the city, and there, after night had drawn a dark curtain over the earth, with no eye but God's to witness the damnable deed, perpetrated a crime unheard of in the annals of history. Medical men, who have full knowledge of the anatomy of the parts and the anatomical relations of the genital organs of the female, and who know how small and undeveloped these organs are prior to puberty, may well ask the question, "How could a child of the age and size of this one be outraged or raped by a man * * * as this man had?"

This question as to how he accomplished the act? was asked the rapist, and he answered, "I smothered the child's cries by putting my hand over her mouth. I then tore the parts and made them large enough to force an entrance." He further stated that he sat down with his back against a tree, and, after forcing the child's legs as far apart as he could, he accomplished the act of cohabitation by repeatedly jerking the child against his person.

The child was outrageously torn and mutilated. The examining physicians report complete laceration of the perineal body, the rupture connecting the vagina and abdominal cavity, so that the penis of the negro must have passed immediately into the abdominal cavity.

It was not learned, as the brutal negro did not seem to know, at what stage of this torture the child died.

The child was choked until its tongue lolled from its mouth and remained so. The bruises from the demon's grasp on its throat were plainly defined.

The presumption is that the first ravishment did not kill the child, and that he then choked it to death and then repeated the act, as he confessed to raping the child after it was dead.

These confessions were not made under torture, but when the negro believed he would have a trial and be sent to the penitentiary, or, to use his own language, "go to the pen for a number of years," which he said he didn't mind or care for.

This is the crime—a crime unknown to the laws of our country—which was perpetrated by the negro, Henry Smith, and for whose execution by fire, and torture inflicted by the father of the child, the people of Texas are branded as murderers, demons, barbarians, etc.

Respectfully,

J. M. FORT, M. D.

Paris, Texas, Feb. 10th, 1893.

[He must be a heartless fool to adjudge the punishment for such a crime as too severe. The simple statement of facts warrants all that was done to such a scoundrel.—EDITOR.]

An Old-Timey Specific (?) for Asiatic Cholera.

Mr. Editor,—An old remedy—although, of course, not a "specific for Asiatic cholera," as many old people claim—which I am inclined to think must have virtue, because so favorably commended by those who have used it, and because of the good results of the few cases in which I have used it, is the following, which should be kept ready in anticipation of need "when cholera is about":

R—Gum camphor.

African capsicum.

Carbonate iron.

Gum kino.....āā 3ss

Cider brandy. Cong. ij

Mix. Put into a stone vessel, or wide-neck ground-stoppered jar. Let stand for several days, shaking occasionally.

As soon as a premonitory sign of cholera presents, place the patient, divested of clothing, in a suitable tub, after

having heated in a fire, eight or ten stones, each about the size of a six-pound cannon-ball. Cover the patient and the tub closely with two or three large woollen blankets—leaving an opening only large enough to introduce the hand into the tub. Put four or five of the hot stones in the tub, by the side of the patient, and pour the above mixture upon the stones so that the vapor will surround the patient's body. When the stones become cool, or cease to vaporize the mixture, introduce other hot stones. In a short while the patient's suffering ceases, the "griping" stops, and "convulsions," if present in the beginning, are soon relieved. When perspiration is well developed, give the patient a gill of good brandy, or dilute alcohol, and place him in bed, and cover him well so as to keep up the perspiratory action. After this, ordinary nursing will usually suffice to effect a permanent cure.

J. H. WALLING, M.D.,

Vice President Cullman Co. (Ala.) Med. Soc.

Peninsula, Ala., Jan. 9th, 1893.

[*Note by Editor.*—In this day of belief that the germ of Koch's comma bacillus develops the specific poison or virus which causes cholera, the above practice will cause a smile with many of our readers. Yet it is worth the record to remind the present generation that some of our fathers in medicine who claimed good results during the epidemics of 1834 and 1849 depended upon the surface heating and sweating methods of treatment. We recall an account given us in 1869 or 1870 by the late Dr. Wm. Owen, of Lynchburg, Va.—than whom there was no more reliable practitioner in his section—of his experience with Asiatic cholera. As soon as the collapsing stage began or was developed, he had large log fires kindled, wrapped patients in thick blankets, placed them on the floor, and rolled them over and over as near the fire as it was possible without burning them, and continued this—often for hours at a time—until reaction set in, perspiration developed, etc. This reaction was maintained by blankets in bed, the administration of hot water and brandy, etc. The "roasting procedure" was gone through with time and again, whenever collapses threatened to recur. While we do not recall the estimate of percentage of cures, still it was very large as compared with the statistics then at hand.

This note may possess something more than historical interest to some of our readers who prefer "old-timey methods" to more modern plans of treatment.]

Proceedings of Societies, Boards, etc.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

[Dr. J. F. WOODWARD, Reporter.]

Regular Meeting, January 24, 1893. Dr. Hugh M. Taylor, President, in the chair. Subject for the evening—

Ectopic Gestation.

Dr. Hunter McGuire reported a case he had seen in consultation with Dr. Taylor during December, 1892. A lady, æt. 39, married eleven months without any symptoms of pregnancy until she reported to Dr. Taylor in December. She had missed one period, and was near end of her second month. The attending physician, Dr. Taylor, had diagnosed ectopic gestation a few days before she came to his office. After a very careful and studied examination, Dr. McGuire corroborated the diagnosis and advised an immediate operation. The following day, while Dr. Taylor was explaining to her the urgent necessity of an immediate operation, she complained suddenly of a sharp pain in her abdomen, described as if she were going to be unwell; became faint; perspired freely; seemed cold and pulseless; and, in short, presented all evidences of tubal rupture, shock, and hæmorrhage, and when seen by Dr. McGuire, twenty or thirty minutes after the first symptom of rupture, collapse was as profound as if she had been shot in the abdomen. She was absolutely pulseless, had apparently bled as much as possible, and was, to all appearances, a dying woman. In less than an hour and a half from the beginning of the attack, the abdomen had been opened, the tube ligated, the sac tied off, cavity washed out and closed; yet, in that short time, the patient had lost so much blood that she did not rally.

The abdomen was full of blood, causing the apparently black condition of the peritoneum not unfrequently noticed. The operation lasted a very short while, and the Doctor thought she bled to death in about thirty minutes.

This patient had applied to Dr. McGuire about seven years before to be treated for endometritis. Then, according to her statement, he had found a small tumor in right pelvic cavity. The nature of it he could not recall, however.

During the examination in consultation with Dr. Taylor, Dr. McGuire found many of what he thought fixed symp-

toms of ectopic gestation poorly exhibited, though enough data was furnished to lead him to a prompt diagnosis, such as patulous os, lump in right iliac fossa as large as an English walnut, having a peculiar feel as if that of a fatty tumor or fecal mass, scanty sanguino-fibrinous discharge, accompanied by severe lancinating pains located about the seat of the tumor, intervals of ease being very distinct, and at times lasting for hours.

Dr. McGuire thought great credit was due Dr. Taylor for the correct diagnosis of ectopic gestation before end of twelfth week, and before rupture. For, so far as he had been able to gather from the literature on the subject, very few cases had been correctly diagnosed before rupture until very recent years. He thought that many of such cases could be diagnosed by the attending physician if he were to follow more closely into the chain of symptoms present. Too often are cases of sudden death attributed to heart-failure or apoplexy, when, in reality, they are ruptured tubal pregnancies. He laid very little stress on the frequently-claimed appearances of the breasts as valuable signs in this trouble—certainly nothing about the *mammæ* of this patient suggested pregnancy. He illustrated the unsuspected character of these cases, and the great danger of sudden death, by citing the case of a noted actress, who went with his party across the Atlantic—seemingly in perfect health, but died on reaching the foreign shore from a ruptured tubal pregnancy. He seemed to think it no longer to be doubted that hæmatoma are, in reality, but the evidences of ruptured tubal pregnancies.

The Doctor closed his remarks by most urgently insisting upon prompt abdominal section as soon as a well-grounded diagnosis was made—whether before or after rupture.

Dr. Hugh M. Taylor remarked that it was notable that ectopic gestation most frequently occurred in women who have been a long time sterile. There is generally in such cases a history of some inflammatory changes in the tubes, affecting the ciliated epithelium, resulting in its destruction, and a condition which retards or prevents the wafting of the ovum into the uterine cavity, and favoring the passage of the spermatozoa through the tube to the ovum. While we may look for tubal pregnancy in women a long time sterile, it not unfrequently occurs a few weeks or months after normal labor or an abortion, or it may coexist with either, and even in both tubes at same time. The volume of light thrown upon this subject lately by such

students as Tait, Price, Rosse, and others, establishes conclusively, in his mind, that all ectopic gestations are primarily tubal, and that the so-called ovarian, abdominal, etc., are secondary results. He thought the efforts of the above-mentioned authors have settled, beyond refutation, that pelvic hæmatocele is usually a ruptured tubal pregnancy, excepting a few cases which occur after operations upon the tubes, and a more frequent, but less dangerous, class occurring from suddenly-arrested menstruation. He suggested that some pelvic abscesses might have their origin in this trouble—in that the suppuration had been brought about by endosmosis of intestinal gases, etc.

He thought it unusual to find such a well-connected chain of symptoms as occurred in the case reported. The history of sterility, regular menstruation up to a certain time, one period missed or delayed for a few days, slight nausea, bloody uterine discharges, lasting an hour or two each week for last six or eight weeks; pain in right iliac region intermittent, but at times violent; and, on examination, a small lump, feeling like a fatty tumor or fecal impaction—altogether presented a combination of symptoms and conditions fully warranting immediate operative interference. It was a horrible experience to witness the shock and hæmorrhage—the impending death that overtook the poor patient. He thought that if he had been called not knowing the circumstances he would have attributed her death to heart-failure or apoplexy. Thus, the opinion of the Coroner of Philadelphia is sustained—that many of these cases are never suspected. In regard to the different kinds of ectopic pregnancy, he thought the interstitial form should hardly be classed as a distinct variety, as there was no well-authenticated case of such a variety emptying through the uterus. As Mr. Tait remarked, it is easier to believe that the diagnostician has made a mistake than it is to admit that such a variety has ruptured into the uterine cavity and discharged in that way. Mr. Tait himself has met with only one case in a series of seventy-six cases of tubal pregnancy. To him modern experience seems to teach that an ovarian form is utterly impossible, as in such a case the fecundated ovum must drop into the peritoneal cavity, where it will be digested by the peritoneum. The tubo-ovarian variety is a possibility where there is adhesion between the extremities of the tubes and the ovaries. But let the gestation occur where it may—interstitial, ovarian, or tubal—let it rupture into the cavity of

the peritoneum, or primarily between the folds of the broad ligament, the indications for treatment are the same—laparotomy. To temporize with electricity seemed to him to savor of shirking duty. To shoot a few flashes of electricity through an unknown mass, claiming to have electrocuted a tubal foetus, implied an elastic imagination or conscience.

Dr. Geo Ben Johnston remarked that Dr. Taylor had enjoyed about the rarest opportunity ever allotted to a Virginia doctor to witness the signs and symptoms of commencing and fatally terminating abdominal hæmorrhage due to rupture of tubal pregnancy. He thought his observations had led him to believe in only three forms of ectopic gestation, *i. e.*, interstitial, tubal, and abdominal—all of which had their origin in the tubes, and derived their names from their respective locations—considering the tubal variety most dangerous. He wished to impress the importance of a more general watchfulness on the part of general practitioners, so that an early diagnosis might be made in order that these cases might come at a more favorable period under the surgeon's care.

Dr. J. N. Upshur thought many of the symptoms alluded to of a somewhat negative value. In the later stages of a large number of cases, the diagnosis seemed unmistakable, while in many of the earlier diagnoses, it seemed equally as simple, when in reality no pregnancy existed. He thought the interstitial variety a possibility, and referred to a case where he had been called in consultation in which all the symptoms pointed to interstitial pregnancy, with implantation very close to the uterine orifice of the tube—basing his diagnosis on the fact that the tumor was quiescent when patient complained of pain—no uterine souffle—and natural heart sounds of mother very plain through tumor. Shape of lower part of uterus remaining nearly its pear shape, as felt through vagina; cervix was decidedly deflected to right side. Menstruation had stopped. No quickening until near seventh month. The child was born, however, per vaginam shortly afterwards. He referred to another case seen soon after, where he had every evidence of ectopic gestation, but was not allowed to resort to surgery.

Dr. Landon B. Edwards remarked that discussion of this subject too often takes the form of the comparative values of electricity and laparotomy—the surgeon relentlessly condemning the use of electricity for the destruction of the foetus in early recognized cases of extra-uterine pregnancy. No electro-therapeutist, however enthusiastic he may be, de-

nies to the surgeon his rightful claims to wonderful success in the saving of the lives of mothers by laparotomy, even after severe hæmorrhage has begun. But the case reported by Drs. McGuire and Taylor illustrates that ectopic gestation can be diagnosed before rupture takes place, and hence before hæmorrhage endangers the life of the mother. True there are rare statistics of fœtuses breaking through the tubes and safely nestling themselves in the peritoneal cavity, and of being extracted at full term by laparotomy with the reward of live births and saved mothers. But he doubted if practitioners who have a right to lead in opinion or practice to-day, would advise to let early recognized cases alone. Yet many women, to whom their true condition is made known, and to whom the necessity for prompt laparotomy is told, are almost as much shocked by the serious information, so unexpectedly given them, and by the dread of the surgeon's knife in so capital an operation, as by the tubal rupture itself and the hæmorrhage into the peritoneal sac. Or it may be that the surgeon desired for such an operation is not at hand; or else the immediate surroundings of the patient are not suited to an aseptic operation, etc. Still, every hour of delay after the recognition of a tubal pregnancy, fast approaching its limit of twelve, or fourteen weeks, is more and more dangerous. It is in just such a state of affairs that the life of the fœtus should be destroyed, preferably by an interrupted galvanic current of from twenty to thirty milliamperes, sending a succession of shocks through the fœtal sac. No demonstration has yet been made that the placenta continues to grow after death of the fœtus by such means. Of course death of the fœtus stops its growth; so that the whole mass becomes an encysted tumor, which is not liable to rupture until the surgeon can be procured, or until the will of the patient can be made to submit to the laparotomy necessary for the removal of the mass. It is waste of time to undertake the discussion of the relative merits of electricity or the knife for the cure of ectopic gestation. Electricity has its undoubted uses in unruptured pregnancies, while the surgeon's art is afterwards required. One electrode properly protected as to the vaginal part is passed up to the tumor as felt through vaginal wall (or, it may be, per rectum), while the other electrode is placed on the abdominal wall over the fœtal tumor, and a current of about 120 interruptions per minute is applied three or four minutes at a time, with moments for rest. Such a current used two or three times a week will quite surely destroy the life of the fœtus.

Oophorectomy following Hystero-Catalepsy.

Dr John N. Upshur reported the case of a woman who came under his care in June, 1890. She presented the general symptoms of dyspepsia, chronic diarrhœa, of intensely nervous temperament, menstruation irregular, painful, scanty, and of dark color. Digital examination showed uterus ante-flexed and tilted backwards; specular examination, highly colored os and cervix, and exaggerated stenosis of cervix, and some reflex vesical trouble, hyperæsthetic condition of vaginal tract and uterus. During her periods the nervous symptoms were more exaggerated; the patient usually went into a trance with rigid condition of the muscles and severe opisthotonos lasting for hours. After preliminary treatment locally of emolient vaginal douches, with general treatment, anti-dyspeptic and nervine, the operation of forcible divulsion of cervix was done and the cavity treated. After six months the patient was discharged, seemingly well; menstruated regularly and normally as to character and quantity, and local absence of symptoms of hystero-catalepsy. This condition lasted until September, 1891, when he was again called. Found all of old symptoms returned, menstruation free, lasting for five or six days, but first intermittent, then continuous, accompanied by agonizing pain in back, iliac region over ovaries, constant nausea, and *occipital headache*, hystero-catalepsy at periods worse and more uncontrollable than formerly. Dr. Geo. Ben. Johnston was called in consultation; confirmed the diagnosis of aggravated ovarian disease, and agreed in the opinion that ovariectomy afforded her the only hope of recovery. Here Dr. Johnston, at request of Dr. Upshur, exhibited specimens of diseased ovaries removed from patient Dr. Upshur had referred to; the left ovary had undergone cysto-fibromatous degeneration, and the tube was greatly inflamed and was removed. The right ovary presented a fibroma as large as an orange, and was removed with much difficulty, requiring a tedious dissection. He considered the specimens interesting because of the uncommon characteristics present.

Case of Obstruction of Bowels—Fatal Probably Appendicitis.

Dr. Parker had seen a case some days before which he at first thought reversed peristalsis of bowels. Man æt. 70, general health good, taken with pain in bowels and obstinate constipation.

R.—Hydrarg. chlo. mit.....

Sodi bicarb.....āā gr. v

Ext. colocynth comp.....gr. ij

M. ft. caps. No. ij. S.—To be taken at once.

Next morning he found patient had a fecal discharge from mouth. It was not described as vomited, but as a regular fecal discharge. Soon afterwards vomiting was severe and continued more or less through the attack. Slight fever, sick colicky pains, obstinate constipation. A tube two and one-half feet was passed up colon and the bowel as far as possible washed out. He continued this way with more or less exacerbation of symptoms for six days and died from sheer exhaustion and not by collapse or signs of death from intestinal obstruction. The doctor suggested that it might have been nervous constriction of the gut.

Case of Suppurative Peritonitis Operated upon for Appendicitis.

Dr. D. A. Kuyk reported the case of a man æt. 38. Seen for first time December 26th, 1892, when he complained of a pain in the abdomen just below the navel. The abdomen was flat, not swollen, tongue heavily coated, pulse slightly accelerated. The doctor thinking it indigestion, prescribed for the time :

R.—Hydrarg. chlo. mit. gr. x

Sodi bicarb. gr. xv

Misce, et ft. pil. No. 1.

Sig.—Take at once, to be followed by a tablespoonful of castor oil and one sixth of grain morphia to quiet pain.

On following morning he found patient still suffering. He ordered a tablespoonful of sweet oil every hour for six or eight hours, at end of which time an enema was given—one-half gallon water—bringing away slight evidences of fecal matter. Pain continued, fever increased, but no swelling. A rectal tube two feet long was passed, and one-half gallon of water thrown up the colon. Next morning, temperature 102°, pulse quick and jerky, abdomen distended, tympanitic, and marked tenderness in right iliac fossa. “McBurney’s point” well defined. Dr. Oppenheimer was called in consultation, agreeing upon a previous diagnosis of appendicitis—operated. Found intestines distended with gas, and of a dusky red color. A severe suppurative peritonitis present. The appendix was absolutely free from disease. An artificial anus was made, but patient died four days later from exhaustion after a short spell of hiccoughs; but no vomiting occurred at any time.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Jan. 23, 1893.—Stated meeting. Dr. Chas. Carroll Lee, President, in chair.

Discussion on

Practical Data in the Application of Water in Some Intractable Diseases. (See page 1012.)

Dr. Mary Putnam Jacobi remarked, that one can hardly do better than to repeat what Dr. Baruch has said in almost the words employed by him, that in water, by means of the various forms of its application, we have a type of almost every other possible therapeutic measure. Only one remark should be added to mitigate the fanaticism of certain uneducated water enthusiasts—namely, that the water treatment does not go far enough to meet all the indications. She has been exceedingly delighted to see that the subject has begun to be taken up seriously in New York city, where, until Dr. Baruch began to study and investigate it, it had been much neglected. It is curious that German physicians who think that water is good for serious and intractable diseases should regard it as dangerous in ordinary hygiene. That seems to be a notion prevalent among the German population of this city and also in Germany. She cited the remark of Uffelman, recommending, with caution, that children should have the face and neck washed every day, while the possibility of washing the child's whole body every day seems never to have occurred to him. In another treatise by a German author it is said to be exceedingly good to have a course of cold water treatment a few weeks, but to be continued permanently it is altogether too exciting to the nervous system; and this superstition that the cold bath is too exciting to be tolerated, and that it is something which people can only gird themselves up to with great energy and strength of will, is very frequently encountered among the laity and many physicians. She remembers having rather an acrimonious controversy with a doctor because she had advised the cold water douche for a lady patient. She was a typical neurasthenic. He had once had the same trouble, he said, and had suffered such tortures from the cold douche that he would never be cruel enough to ask that a delicate girl be subjected to it. Dr. Jacobi thinks Dr. Baruch must have had great influence over the young lady whose case he has just related to induce her to continue the treatment after she had fainted under it on several

occasions. Her own observation has been, that if patients feel at all tired after they have undergone one seance with the water treatment, they consider that they have entirely gone to pieces; and will not discuss the matter further, lest they be persuaded to continue it. It seems that where persons feel so badly after beginning the cold water treatment, it is because the vaso-motor system of nerves have been excited out of proportion to the excitation which should be conveyed to the spinal nerve centres. It is an elementary truth to which Dr. Baruch has referred, that the characteristic result of the application of cold water to the skin is a very great stimulus to the nerve centres and dilatation of the cutaneous vessels; but in some instances, instead of there being excitation of the centres in the cerebro-spinal system of nerves, the excitation is expended upon the vaso-motor system, producing contraction of the blood vessels and diminished blood supply as a tertiary rather than as a secondary effect; so that the subject remains cold or chilly, and the surface pale. There is also apparently contraction of the blood vessels of the brain, which may account for the intensely wretched feeling from which the person suffers. It is evidently entirely improper, as Dr. Baruch has pointed out, to begin the treatment in such cases by applying cold to the surface. One must begin with heat. She supposes when the blood vessels on the surface are mechanically dilated by heat, that there is such a degree of stimulus of the cerebro-spinal nerves they are not exhausted by the subsequent application of cold. It seems to her that the value of hot water in the treatment of Bright's disease is due to lowering the blood tension by dilatation of the blood vessels on the surface of the skin. She cannot see that it acts directly to make the kidneys better, but that by lowering the blood tension it overcomes one of the elements of the disease. She asked Dr. Baruch his opinion of an assertion by Dr. Weber, of London, that persons who have commencing uric acid deposits should not be subjected to the use of cold water, Dr. Weber advising only hot water. Would Dr. Baruch regard this simply as a fancy?

Dr. Frederick Peterson came in late, yet, being acquainted with the views of the author, he is sure he should coincide with most of his statements. He particularly favors hydrotherapy in nervous and mental diseases. There are many conditions of mental disorders in which hydrotherapy is of great value. In the sleeplessness of incipient melancholia we have no other agent quite as efficient as pro-

longed warm baths. In the motor excitation of acute mania there is, he thinks, no agent quite as useful as the hot wet pack; it is much better than the strait-jacket and injections of hyoscyamia. In a conversation, Professor Winternitz, of Vienna, who had had much experience with hydrotherapy in chronic diseases, said that fully two-thirds of his cases are of nervous diseases; that he found this agent successful in many diseases considered incurable—not that it cured them, but that it alleviated many of the symptoms. Hydrotherapy should be much more used; it is valuable in chorea, epilepsy, and many spinal disorders.

Dr. A. D. Rockwell remarked, as to therapeutic methods, other than medication, we cannot but be struck by their permanency. Hot and cold water, exercise, etc., have been known since the beginning of medicine, and the more we know of them the better do we appreciate them. He quite agrees with Dr. Peterson as to the great value of water in nervous conditions. A special use of water—a mechanical use it is true—but one of great value, is intestinal irrigation. We all know the vast misery from chronic constipation, whatever it may arise from, and we know how much the person is improved by having the bowel flushed. It does seem unphysiological to throw such large quantities of water into the rectum; it does interfere with peristaltic action, and many who have commenced it, have had to give it up. To prevent the occurrence of paralysis of the bowel he has found nothing better than electricity applied by the bipolar method.

Dr. Charles C. Ransom can confirm what Dr. Baruch has already said by his experience at Richfield Springs, where he has occasion to use water in many cases during the summer, particularly of its value in nervous conditions. The few nervous cases which he has seen have been mostly of neurasthenia in business men, worn out by close attention to their affairs. In them he has used the cold douche with the most excellent effect. It relieves their insomnia, increases the nerve tone, and aids digestion.

Dr. Baruch's object in reading the paper was to give practical details and demonstrations, showing that water can be applied to the most delicate subjects. He has seen this demonstrated very often at the Montefiore Home, where a condition of admission is the incurability of the disease, in most desperate cases. There we find patients who never took a bath before gradually become accustomed to taking the rain bath at a temperature

of 65°F. every day. He would impress the impropriety of using the terms cold water or warm water. We do not tell patients to take quinine or strychnine; we give them the dose and time of taking it. Special directions should be given as to the temperature at which a bath should be taken, the necessity for securing reaction, etc. Referring to Dr. Jacobi's question, he might say that no person is better able to judge than she of the influence of water upon tissue metamorphosis, about which she wrote the best book in the English language as long as ten years ago. I have endeavored to show that a rational, cautious use of water in the treatment of many intractable diseases is free from shock or other unpleasantness, and leads to surprising results.

Book Notices.

Alcoholism, and its Treatment. By J. E. USHER, M. D., formerly Surgeon-Superintendent and Medical Officer of Health to Queensland Government. New York: G. P. Putnam's Sons. 1892. Cloth, 12mo. Pp. 161. Price, \$1.25. (For sale by West, Johnston & Co., Richmond.)

Now that such things as the Keeley, the bichloride of gold, and like crazes are on the wane as frauds upon the credulous, as they would be inhuman almost in their practice were their claims sustained, such a practical book as this is of great value. It treats of alcoholism as a disease, and lays down principles and details for the guidance of the physician in dealing with such cases. While undoubtedly there are physical conditions that lead some to become alcoholists, and as such diseased, just as there are conditions which induce priapism, etc., yet it cannot be denied that the great majority of drunkards are so simply because they *willingly* yield to temptation which they could easily have resisted had they applied the same principles to govern them that they do with reference to other suggestions or temptations. For the other class, who cannot control gratification of their appetites, because induced by a physical condition, of course the exciting physical cause should be sought and removed, and then aid should be rendered by a course of treatment at a good inebriate home under competent medical advice. In this country none have done more to advance the treatment of inebriates, etc., than Dr. T. D. Crothers, of Hartford, Conn.

Manual of Practical Medical and Physiological Chemistry.

By CHARLES E. PELLEW, E. M., Demonstrator of Physics and Chemistry in College of Physicians and Surgeons, New York. *With Illustrations.* New York: D. Appleton & Co. 1892. Cloth. 8vo. Pp. 314. Price. \$2.50. (For sale by West, Johnston & Co., Richmond.)

This approaches more nearly the ideal work on medical chemistry than any we have seen. It presupposes, of course, ordinary academic acquaintances with the principles of chemistry. But as to the details of study of *medical chemistry*, those things which are specially interesting to the medical man are the matters of illustration, experiment and description. The Manual is based upon a course of thirty lectures which relate to the carbohydrates, fats and fixed oils, proteids of albuminous bodies, inorganic constituents of the body, water analysis, animal tissues and secretions, digestion, urine, its microscopical examination, with appendices descriptive of apparatus needed, etc. We hope to see the plan of instruction here adopted incorporated in the tuition of medical colleges; and then the graduates would feel that their hours spent in the chemical hall had been made valuable to them as practitioners.

Coal-Tar Colors, with Especial Reference to their Injurious Qualities and the Restriction of their Use. By THEODORE WEYL. *With a Preface by Prof. Sell. Translated with Permission of the Author* by HENRY LEFFMANN, M. D., Ph. D., Professor of Chemistry in Woman's Medical College of Pennsylvania, etc. Philadelphia: P. Blakiston, Son & Co. 1892. Demi 8vo. Pp. 154. Cloth. \$1.50. (For sale by West, Johnston & Co., Richmond.)

This sanitary and medico-legal investigation contains some rather unexpected revelations as to the practical non-poisoning qualities of dyes, etc., as used in fabrics, foods, confections, etc. It suggests, however, that when a *chronic poisoning* article is used as a dye or coloring, the name of such poisonous material should be labelled on the package, so as to keep wearers or users on their guard. The purpose of the author was to write so as not to let the technicalities of chemistry interfere with the understanding by the practitioner, nor yet not so medically technical as to prevent the chemist from appreciating the medical side of the questions at issue. To manufacturers, doctors, and sanitarians alike, this work must long stand as the authoritative one on all such subjects as the coal-tar dyes, colorings, etc., now almost daily used.

Text-Book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease, and their Employment upon a Rational Basis. By HOBART AMORY HARE, M. D., B. Sc., Professor of Therapeutics and Materia Medica, Jefferson Medical College of Philadelphia, etc. *Third Edition.* Enlarged and Thoroughly Revised. Philadelphia: Lea Brothers & Co. 1892. Cloth. 8vo. Pp. 696. Price, \$3.75.

Scarcely more than a year ago, with reference to the second edition then issued, we had to say that it was the very book needed by the practitioner. Now we have to add in our notice of the third edition, that enlargement and revision has made it even a better book and still more serviceable to the practitioner—special as well as general. Part I, through page 38, is taken up with general therapeutic considerations. Part II—about 300 pages—describes drugs, stating their physiological action, therapeutic uses, counter-indications, untoward effects, toxic action, forms of administration, doses, etc. Part III—about 40 pages—relates to remedial measures other than drugs and to foods for the sick. Part IV—about 280 pages—gives the most improved plans of treatment of various diseases, named alphabetically, tables of doses and remedies, relative weights and measures in metric and apothecaries systems, index of drugs and remedial measures and index of diseases and remedies. In short, the whole book is arranged for the prompt practical needs of the physician. It includes such recently introduced drugs as salophen, guaiacol, diuretin, europfen, thiol, phenocoll hydrochloride, piperazine, dermatol, pentol, terpine hydrate, terpinol, the salts of strontium, etc.

Practical Guide for Beginners to the Dissection of the Human Body. By IRVING S. HAYNES. Ph. B., M. D., Demonstrator of Anatomy in Medical Department of University of City of New York, etc. New York: E. B. Treat. 1893. Oblong 12mo. Pp. 250, of which one half are blank. \$1.

This "pocket edition" comprises improved methods and formulæ of work for anatomical beginners. It in no way is intended to take the place of the larger works on descriptive anatomy, but rather to supplement them by supplying the absence of detail noticed in such books. It is the book which ought to be kept before the dissector to guide him in making his dissections. It presupposes the reading of the standard works, and a knowledge of such teachings as are contained in Holden's *Landmarks*. It is a great help to the young dissector, and, properly used, will be found of exceedingly great value to him as he undertakes his dissections of his first subjects in the dissecting-room.

Anatomy and Surgical Treatment of Hernia. By HENRY O. MARCY, A. M., M. D., LL. D., of Boston, President American Medical Association; Surgeon to Hospital for Women, Cambridge, etc. *With 66 full-page Heliotype and Lithographic Plates, including 8 Colored Plates from Bougery, and 37 Illustrations in the Text* New York: D Appleton & Co. 1892. Royal 4to Pp 421. Price, \$15. (For sale by subscription only.)

There is need for a book like this by such an author as it has. It embodies all that is substantially good in the works of previous authors, and improves upon them by the addition of the more recent advances under antiseptic and aseptic practices. Perhaps the most important truth developed by antiseptic surgery, as it relates to the radical cure of hernia, is the fact that animal sutures can be permanently left buried to retain and support weakened tissues in any part of the body. The methods employed so successfully by the author for at least two decades involve "the closure of the internal ring from below upward behind the cord, lifted from its bed; the coaptation and re-enforcement of the transversalis fascia and structures which go to make up the posterior wall of the inguinal canal "by the use of the buried animal suture." In this way "the exit of the spermatic cord is elevated, the obliquity of the canal restored, and the intra-abdominal pressure brought to bear at right angles to it." In every respect this great work fills the claims of the standard authority on the subjects of which it treats. Where the individual practitioner may not feel able to purchase it, the local medical society should adopt it as one of the essential books for the library.

Editorial.

The Florida Medical Association

Will begin its Twentieth Annual Session in Jacksonville, April 4th, 1893. Dr. R. P. Daniel is Chairman of Committee of Arrangements. The Secretary, Dr. J. D. Fernandez, of Jacksonville, in his preliminary circular, names Drs. R. A. Lancaster, of Gainesville; R. L. Harris, of Oakland; J. S. Herron, of Pensacola; Jos. Y. Porter, of Key West; and O. E. Worcester, of Conant, as chairmen respectively of the sections on Medicine, Surgery, Gynæcology, Hygiene, and Diseases of Children. Each chairman is expected to secure as many papers in his special department as possible, and send titles to the Secretary, so as to be announced in the Circular to be issued about March 15th.

Ophthalmological Section of the Pan-American Medical Congress.

Dr. Julian J. Chisolm, of Baltimore, chief of Ophthalmological Section of the Congress, has organized his department with the following well-known Ophthalmic Surgeons:

Dr. Geo. M. Gould, Philadelphia, Pa., English-speaking Secretary; Dr. J. Harris Pierpont, of Pensacola, Fla., Spanish-speaking Secretary.

The honorable Presidents of this section are: Drs. Herman Knapp, New York; Eugene Smith, Detroit; Stephen C. Ayres, Cincinnati; J. L. Thompson, Indianapolis; X. C. Scott, Cleveland; Abner Calhoun, Atlanta; Herbert Harlan, Baltimore; Chas. W. Kollock, Charleston; Stephen C. Richey, Washington; Jose Ramos, City of Mexico; G. C. Savage, Nashville; J. E. Minney, Topeka; W. H. Carmelt, New Haven; B. J. Baldwin, Montgomery; Aurelio Alarco, Lima, Peru; Carlos Finley, Havana, Cuba; Hasket Derby, Boston; J. C. Kipp, Newark; Dudley S. Reynolds, Louisville; Maximo Cienfuegos, Santiago; F. C. Hotz, Chicago; Chas. E. Michel, St. Louis; Samuel D. Risley, Philadelphia; R. H. Lewis, Raleigh; T. E. Murrill, Little Rock; E. C. Rivers, Denver; C. M. Shields, Richmond, and J. F. Fulton, St. Paul.

In the Advisory Council are the following Ophthalmic Surgeons: Drs. Adolph Alt, St. Louis; L. W. Fox, Philadelphia; Geo. T. Stevens, New York; Edward Jackson, Philadelphia; B. A. Randall, Philadelphia; H. V. Wurde-
man, Milwaukee; R. Sattler, Cincinnati; J. J. Thompson, Kansas City; L. Connor, Detroit; Hiram Woods, Baltimore; R. L. Randolph, Baltimore; J. A. White, Richmond; S. M. Burnett, Washington; A. R. Baxter, Cleveland; and J. P. Parker, Kansas City.

Officers-Elect of the Medical Society of the District of Columbia, D. C.

At a recent meeting of the Medical Society of the District of Columbia, held January 2d, 1893, the following officers were elected for the ensuing term: *President*, Dr. J. Wythe Cook; *Vice-Presidents*, Drs. Llewellyn Eliot, J. H. Mundell; *Treasurer*, Dr. C. W. Franzoni; *Corresponding Secretary*, Dr. Thos. C. Smith; *Recording Secretary*, Dr. Samuel S. Adams; *Librarian*, Dr. Edwin L. Morgan; *Board of Examiners*, Drs. C. H. A. Kleinschmidt, W. Sinclair Bowen, Samuel S. Adams, George N. Acker, George C. Ober; *Board of Censors*, Drs. C. W. Richardson, Ernest F. King, John T. Winter.

Applicants for Grade of Assistant Surgeons U. S. Marine-Hospital Service

A board of officers will be convened at Washington, March 20th, 1893, to examine applicants for the grade of Assistant Surgeon in the U. S. Marine-Hospital Service. Candidates must be between 21 and 30 years of age, graduates of respectable medical colleges, and must furnish testimonials from responsible persons as to character.

The following is the usual order of the examination: 1, Physical; 2, Written; 3, Oral; 4, Clinical. In addition to the *physical examination*, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly *in writing*, and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. *The oral examination* includes subjects of preliminary education, history, literature, and natural sciences. *The clinical examination* is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on the cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appointment, the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

After four years service, Assistant Surgeons are entitled to examination for promotion to the grade of Passed Assistant Surgeon.

Promotion to the grade of Surgeon is made according to seniority, and after due examination as vacancies occur in that grade. Assistant Surgeons receive sixteen hundred dollars; Passed Assistant Surgeons eighteen hundred dollars, and Surgeons twenty-five hundred dollars a year. When quarters are not provided, commutation at the rate of thirty, forty, or fifty dollars a month, according to grade, is allowed.

All grades above that of Assistant Surgeon receive longevity pay, 10 per centum in addition to the regular salary for every five years service, up to 40 per centum after twenty years service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address Walter Wyman, Supervising Surgeon-General, U. S. Marine-Hospital Service, Washington, D. C.

Officers, etc., of the American Electro-Therapeutic Association.

During the Second Annual Meeting the following officers were elected for the ensuing year: *President*, Dr. Augustin H. Goelet, No. 531 West 57th street, New York; *Vice-Presidents*, Drs. Wm. F. Hutchinson, Providence R. I.; and W. J. Herdman, Ann Arbor, Mich.; *Secretary*, Dr. Margaret A. Cleaves, 68 Madison avenue, New York; *Treasurer*, R. J. Nunn, Savannah, Ga.

The Third Annual Meeting will be held in Chicago Sept. 12th, 13th and 14th, 1893. A cordial invitation is extended to all members of the profession interested in electro-therapeutics. Arrangements for special rates on railways and at hotels are in progress.

The Committee of Arrangements will be obliged if those who intend being present at the meeting will send their names, the class and amount of accommodation required, titles of papers to be presented, applications for membership, etc., at as early a date as possible. Accommodation should be secured early on account of the crowded condition of the hotels, because of the World's Fair. All communications should be addressed to the Secretary. The Committee will be glad to furnish information in regard to the meeting upon application.

Dr. Franklin H. Martin, *Chairman*, and Dr. S. C. Stanton, 3537 Indiana Ave., *Secretary*, Committee of Arrangements.

The Society of the Alumni of Charity Hospital, Blackwell's Island, New York City,

Gave the Third Annual Dinner at Clark's, No. 22 West Twenty third street, New York, March 1st, 1893. Cost of tickets, \$3. Dr. Walter L. Carr was President; Dr. Alexander Lyle, Secretary, 112 East Eighty-first street.

Treatment of Asthma—Correction.

In Dr. Thomas J. Mays' article (December, 1892,) on the *Treatment and Management of Asthma*, page 756, the prescription calls for "syr. hyposulp." Whoever is following out the excellent suggestions of Dr. Mays as given in that article should substitute "*syr. hypophosph.*," so as to let the prescription read:

R—Strychniæ sulph..... gr. i½
 Syr. acid. hydriodici.....
 Syr. hypophosph.....āā f. ʒij
 M. S.—One teaspoonful four times daily.

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